9/670096

Welcome to STN International! Enter x:x

LOGINID:ssspta1813nxm

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS 1		Web Page URLs for STN Seminar Schedule - N. America
NEWS 2	Apr 08	"Ask CAS" for self-help around the clock
NEWS 3	Jun 03	New e-mail delivery for search results now available
NEWS 4	Aug 08	PHARMAMarketLetter(PHARMAML) - new on STN
NEWS 5	Aug 19	Aquatic Toxicity Information Retrieval (AQUIRE) now available on STN
NEWS 6	Aug 26	Sequence searching in REGISTRY enhanced
NEWS 7	Sep 03	JAPIO has been reloaded and enhanced
NEWS 8	Sep 16	Experimental properties added to the REGISTRY file
NEWS 9	Sep 16	CA Section Thesaurus available in CAPLUS and CA
NEWS 10	Oct 01	CASREACT Enriched with Reactions from 1907 to 1985
NEWS 11	Oct 24	BEILSTEIN adds new search fields
NEWS 12	Oct 24	Nutraceuticals International (NUTRACEUT) now available on STN
NEWS 13	Nov 18	DKILIT has been renamed APOLLIT
NEWS 14	Nov 25	More calculated properties added to REGISTRY
NEWS 15	Dec 04	CSA files on STN
NEWS 16	Dec 17	PCTFULL now covers WP/PCT Applications from 1978 to date
NEWS 17	Dec 17	TOXCENTER enhanced with additional content
NEWS 18	Dec 17	Adis Clinical Trials Insight now available on STN
NEWS 19	Jan 29	Simultaneous left and right truncation added to COMPENDEX, ENERGY, INSPEC
NEWS 20	Feb 13	CANCERLIT is no longer being updated
NEWS 21	Feb 24	METADEX enhancements
NEWS 22	Feb 24	PCTGEN now available on STN
NEWS 23	Feb 24	TEMA now available on STN
NEWS 24	Feb 26	NTIS now allows simultaneous left and right truncation
NEWS 25	Feb 26	PCTFULL now contains images
NEWS 26	Mar 04	SDI PACKAGE for monthly delivery of multifile SDI results
NEWS 27	Mar 20	EVENTLINE will be removed from STN
NEWS 28	Mar 24	PATDPAFULL now available on STN
NEWS 29	Mar 24	Additional information for trade-named substances without structures available in REGISTRY
NEWS 30	Apr 11	Display formats in DGENE enhanced
NEWS 31	Apr 14	MEDLINE Reload
NEWS 32	Apr 17	Polymer searching in REGISTRY enhanced
NEWS 33	Apr 21	Indexing from 1947 to 1956 being added to records in CA/CAPLUS
NEWS 34	Apr 21	New current-awareness alert (SDI) frequency in WPIDS/WPINDEX/WPIX
NEWS 35	Apr 28	RDISCLOSURE now available on STN
NEWS 36	May 05	Pharmacokinetic information and systematic chemical names added to PHAR

NEWS EXPRESS	April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS INTER	General Internet Information
NEWS LOGIN	Welcome Banner and News Items
NEWS PHONE	Direct Dial and Telecommunication Network Access to STN
NEWS WWW	CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 14:49:07 ON 15 MAY 2003

=> file biosis medline agricola embase caba wpids japio biotechds lifesci caplus
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 0.21 0.21

FILE 'BIOSIS' ENTERED AT 14:49:30 ON 15 MAY 2003
COPYRIGHT (C) 2003 BIOLOGICAL ABSTRACTS INC.(R)

FILE 'MEDLINE' ENTERED AT 14:49:30 ON 15 MAY 2003

FILE 'AGRICOLA' ENTERED AT 14:49:30 ON 15 MAY 2003

FILE 'EMBASE' ENTERED AT 14:49:30 ON 15 MAY 2003
COPYRIGHT (C) 2003 Elsevier Science B.V. All rights reserved.

FILE 'CABA' ENTERED AT 14:49:30 ON 15 MAY 2003
COPYRIGHT (C) 2003 CAB INTERNATIONAL (CABI)

FILE 'WPIDS' ENTERED AT 14:49:30 ON 15 MAY 2003
COPYRIGHT (C) 2003 THOMSON DERWENT

FILE 'JAPIO' ENTERED AT 14:49:30 ON 15 MAY 2003
COPYRIGHT (C) 2003 Japanese Patent Office (JPO)- JAPIO

FILE 'BIOTECHDS' ENTERED AT 14:49:30 ON 15 MAY 2003
COPYRIGHT (C) 2003 THOMSON DERWENT AND INSTITUTE FOR SCIENTIFIC INFORMATION

FILE 'LIFESCI' ENTERED AT 14:49:30 ON 15 MAY 2003
COPYRIGHT (C) 2003 Cambridge Scientific Abstracts (CSA)

FILE 'CAPLUS' ENTERED AT 14:49:30 ON 15 MAY 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

=> e mansfield linda s/au
E1 4 MANSFIELD LEE A/AU
E2 1 MANSFIELD LINDA/AU
E3 29 --> MANSFIELD LINDA S/AU
E4 1 MANSFIELD LORD/AU
E5 1 MANSFIELD LOUISE/AU
E6 2 MANSFIELD LUCIELLE/AU
E7 7 MANSFIELD LUCIELLE P/AU
E8 3 MANSFIELD LYNDON/AU
E9 9 MANSFIELD LYNDON E/AU
E10 76 MANSFIELD M/AU
E11 52 MANSFIELD M A/AU
E12 4 MANSFIELD M C/AU

```
=> s e2-e3
L1          30 ("MANSFIELD LINDA"/AU OR "MANSFIELD LINDA S"/AU)

=> e mansfield l s/au
E1          32     MANSFIELD L P/AU
E2           6     MANSFIELD L R/AU
E3         139 --> MANSFIELD L S/AU
E4          24     MANSFIELD L W/AU
E5           4     MANSFIELD LEE A/AU
E6           1     MANSFIELD LINDA/AU
E7          29     MANSFIELD LINDA S/AU
E8           1     MANSFIELD LORD/AU
E9           1     MANSFIELD LOUISE/AU
E10          2     MANSFIELD LUCIELLE/AU
E11          7     MANSFIELD LUCIELLE P/AU
E12          3     MANSFIELD LYNDON/AU

=> s e3
L2          139 "MANSFIELD L S"/AU

=> e rossano mary g/au
E1           4     ROSSANO M J/AU
E2           1     ROSSANO MARILENA/AU
E3           9 --> ROSSANO MARY G/AU
E4          56     ROSSANO P/AU
E5           1     ROSSANO P G/AU
E6          23     ROSSANO R/AU
E7           1     ROSSANO R M/AU
E8           3     ROSSANO R W/AU
E9           1     ROSSANO ROBERT W/AU
E10          7     ROSSANO ROCCO/AU
E11          1     ROSSANO ROMAN MIGUEL/AU
E12         13     ROSSANO S/AU

=> s e3
L3           9 "ROSSANO MARY G"/AU

=> e rossano m g/au
E1           4     ROSSANO M/AU
E2          24     ROSSANO M A/AU
E3          25 --> ROSSANO M G/AU
E4           4     ROSSANO M J/AU
E5           1     ROSSANO MARILENA/AU
E6           9     ROSSANO MARY G/AU
E7          56     ROSSANO P/AU
E8           1     ROSSANO P G/AU
E9          23     ROSSANO R/AU
E10          1     ROSSANO R M/AU
E11          3     ROSSANO R W/AU
E12          1     ROSSANO ROBERT W/AU

=> s e3
L4          25 "ROSSANO M G"/AU

=> e murphy alice j/au
E1           2     MURPHY ALFRED M/AU
E2           1     MURPHY ALICE/AU
E3          14 --> MURPHY ALICE J/AU
E4           2     MURPHY ALICE M/AU
E5           5     MURPHY ALISON/AU
E6           1     MURPHY ALISON A/AU
E7           2     MURPHY ALLAN H/AU
```

```
E8            1      MURPHY ALLAN JAMES/AU
E9            1      MURPHY ALLAN R/AU
E10           1      MURPHY ALLEN MILTON JR/AU
E11           1      MURPHY ALLEYNE/AU
E12           3      MURPHY ALLISON R/AU

=> s e2 or e3
L5           15 "MURPHY ALICE"/AU OR "MURPHY ALICE J"/AU

=> e murphy a j/au
E1           24      MURPHY A I/AU
E2            2      MURPHY A I JR/AU
E3          337 --> MURPHY A J/AU
E4           19      MURPHY A J M/AU
E5            1      MURPHY A JR/AU
E6           10      MURPHY A K/AU
E7           77      MURPHY A L/AU
E8            3      MURPHY A LOLA/AU
E9            1      MURPHY A LYND/AU
E10         385      MURPHY A M/AU
E11          14      MURPHY A M C/AU
E12           5      MURPHY A M L/AU

=> s e3
L6          337 "MURPHY A J"/AU

=> e vrable ruth a/au
E1            6      VRABLE R G/AU
E2            2      VRABLE RUTH/AU
E3            9 --> VRABLE RUTH A/AU
E4            2      VRABLEC J J/AU
E5            1      VRABLEC J W/AU
E6           16      VRABLIC A S/AU
E7            5      VRABLIC ANGELICA S/AU
E8            1      VRABLIC ANGELICA SUAU/AU
E9            1      VRABLIC DOROTHY M/AU
E10          50      VRABLIC J/AU
E11           2      VRABLIC M/AU
E12           3      VRABLIC O/AU

=> s e2 or e3
L7           11 "VRABLE RUTH"/AU OR "VRABLE RUTH A"/AU

=> e vrable r a/au
E1            7      VRABLE JOHN B/AU
E2           10      VRABLE R/AU
E3           13 --> VRABLE R A/AU
E4            6      VRABLE R G/AU
E5            2      VRABLE RUTH/AU
E6            9      VRABLE RUTH A/AU
E7            2      VRABLEC J J/AU
E8            1      VRABLEC J W/AU
E9           16      VRABLIC A S/AU
E10           5      VRABLIC ANGELICA S/AU
E11           1      VRABLIC ANGELICA SUAU/AU
E12           1      VRABLIC DOROTHY M/AU

=> s e2 or e3
L8           23 "VRABLE R"/AU OR "VRABLE R A"/AU

=> s l1-18
L9          496 (L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7 OR L8)
```

DT Article
LA English
AB Objective-To determine apparent seroprevalence of **antibodies** against **Sarcocystis neurona** in a population of domestic cats previously tested for **antibodies** against Toxoplasma gondii. Design-Cross-sectional study. Sample Population-Serum from 196 domestic cats. Procedure-Banked serum samples submitted to the Michigan State University Animal Health Diagnostic Laboratory for T gondii diagnostic testing were tested for **antibodies** against S neurona by use of an indirect fluorescent **antibody** (IFA) test and a western blot test. Submission records were analyzed to determine descriptive statistics and test for associations between positive results of a test for S neurona and other variables in the data set. Results-10 of 196 (5%) samples yielded positive results for **antibodies** against S neurona by use of western blot analysis, whereas 27 samples yielded positive results by use of the IFA. No association was found between S neurona western blot test results and T gondii test results, age, sex, or the reason for T gondii testing. The S neurona IFA titer was positively and significantly associated with positive results of western blot analysis. Conclusions and Clinical Relevance-Domestic cats are not likely to play a substantial role as intermediate hosts in the natural life cycle of S neurona. Results indicate that natural infection of domestic cats may occur, and small animal practitioners should be aware of this fact when evaluating cats with neurologic disease. The S neurona IFA test had lower specificity than western blot analysis.

L14 ANSWER 5 OF 12 WPIDS (C) 2003 THOMSON DERWENT DUPLICATE 3
AN 2001-218486 [22] WPIDS
CR 2000-571969 [49]
DNC C2001-065294
TI Vaccinating equids against protozoal **Sarcocystis neurona** infections using unique antigens.
DC B04 C06 D16
IN **MANSFIELD, L S; MURPHY, A J; ROSSANO, M G; VRABLE, R A**
PA (UNMS) UNIV MICHIGAN STATE
CYC 88
PI WO 2001015708 A1 20010308 (200122)* EN 54p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW
AU 2000071087 A 20010326 (200137)
EP 1207889 A1 20020529 (200243) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
ADT WO 2001015708 A1 WO 2000-US24221 20000831; AU 2000071087 A AU 2000-71087 20000831; EP 1207889 A1 EP 2000-959829 20000831, WO 2000-US24221 20000831
FDT AU 2000071087 A Based on WO 200115708; EP 1207889 A1 Based on WO 200115708
PRAI US 2000-513086 20000224; US 1999-152193P 19990902
AB WO 200115708 A UPAB: 20020709
NOVELTY - Vaccinating equids against **Sarcocystis neurona** infections using polypeptide groups of unique 16 (+4) or 30 (+4) antigens of S. neurona, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:
(a) a vaccine (I) for providing passive immunity to **Sarcocystis neurona** infection, comprising **antibodies** against at least one group of a unique 16 (+4) or 30 (+4) antigen of S. neurona;
(b) a vaccine (II) for active immunization of an equid against a S.

neurona infection, comprising at least one group of a unique 16 (+4) or 30 (+4) antigen of S. neurona;

(c) a vaccine (III) for protecting an equid from S. neurona infection comprising a DNA that encodes at least 1 group of a 16 (+4) kDa antigen and/or a 30 (+4) kDa antigen of S. neurona;

(d) a method (IV) for vaccinating an equid against a S. neurona infection, comprising:

(1) providing a recombinant antigen of S. neurona produced from a recombinant microorganism culture (the microorganism contains a DNA that encodes at least one group of a 16 (+4) kDa antigen and/or 30 (+4) kDa antigen of S. neurona; and

(2) vaccinating the equid;

(e) a method (V) for vaccinating an equid against a S. neurona infection, comprising:

(1) providing a DNA in a carrier solution, a plasmid which encodes at least 1 group of a 16 (+4) kDa antigen and/or 30 (+4) kDa antigen of **Sarcocystis neurona**; and

(2) vaccinating the equid with the DNA in the carrier solution;

(f) a method (VI) of providing passive immunity to a S. neurona infection in a equid, comprising:

(1) providing **antibodies** against at least 1 group of a 16 (+4) kDa antigen and/or 30 (+4) kDa antigen of S. neurona (the **antibodies** may be monoclonal or polyclonal); and

(2) inoculating the equid;

(g) a method (VII) for producing a polypeptide, comprising:

(1) providing a microorganism in a culture containing a DNA encoding a fusion polypeptide comprising at least 1 group of a 16 (+4) kDa antigen and/or 30 (+4) kDa antigen of S. neurona and a polypeptide that facilitates isolation of the fusion polypeptide;

(2) culturing the microorganism in a culture to produce the fusion polypeptide; and

(3) isolating the fusion polypeptide;

(h) a method (VIII) for producing an **antibody** comprising:

(1) providing a microorganism in a culture containing DNA encoding a fusion polypeptide comprising at least 1 group of a 16 (+4) kDa antigen and/or 30 (+4) kDa antigen of S. neurona and a polypeptide that facilitates isolation of the fusion polypeptide;

(2) culturing the microorganisms in a culture to produce the fusion polypeptide;

(3) isolating the fusion polypeptide;

(4) producing the **antibody** from the polypeptide;

(i) a monoclonal **antibody** (IX) that selectively binds to a 16 (+4) kDa antigen and/or 30 (+4) kDa antigen;

(j) an isolated DNA (X) encoding a monoclonal **antibody** that selectively binds to a 16 (+4) kDa antigen and/or 30 (+4) kDa antigen;

(k) a bacterial clone (XI) containing a plasmid comprising a DNA encoding a 16 (+4) kDa antigen and/or 30 (+4) kDa antigen of S. neurona;

(l) a vaccine (XII) for an equid comprising an isolated recombinant protein encoded by a cDNA produced from mRNA of S. neurona encoding a 16 (+4) kDa antigen and/or 30 (+4) kDa antigen;

(m) a vaccine (XIII) for an equid comprising a recombinant virus vector containing DNA encoding a 16 (+4) kDa antigen and/or 30 (+4) kDa antigen of S. neurona;

(n) a DNA vaccine (XIV) for an equid comprising a plasmid containing DNA encoding a 16 (+4) kDa antigen and/or 30 (+4) kDa antigen of S. neurona; and

(o) a method (XV) for protecting an equid against S. neurona which comprises providing a vaccine that when injected into the equid causes the equid to produce antibodies against a 16 (+4) kDa antigen and/or 30 (+4) kDa antigen of S. neurona (the antibodies prevent infection by the Sarcocystis neurona).

ACTIVITY - Antiparasitic.

No biological data given.

(stratified by the state's opossum (Didelphis virginiana) population and the number of equids on each operation) was selected. Ninety-eight equine-operation owners agreed to participate, and blood collection occurred from late March through October of 1997. Data regarding the 98 farms' feeding and management practices were collected, as well as descriptive data for each of the 1121 individual horses. Serum samples were tested for **antibodies** to S. neurona using a Western blot test. The true seroprevalence of **antibodies** specific to S. neurona was estimated to be 60%. Chi-square analysis showed that seroprevalence was lowest in the colder parts of the state that had the fewest opossums ($P < 0.0001$). In two multivariable logistic-regression analyses with random effects grouped by herd, age and exposure to pasture were associated with increased odds of seropositivity, and feeding of sweet feed (grains mixed with molasses) was associated with decreased odds of testing positive. No association was found between farm size, animal gender, hay types, horse-housing types or exposure to natural surface water and seropositivity.

L14 ANSWER 8 OF 12 WPIDS (C) 2003 THOMSON DERWENT DUPLICATE 5
AN 2000-571969 [53] WPIDS
CR 2001-218486 [22]
DNN N2000-423167 DNC C2000-170452
TI Detection of **Sarcocystis neurona**, which causes equine protozoal myeloencephalitis, in horse serum and cerebrospinal fluid comprises identifying a specific **antibody**-antigen complex via an immunoassay.
DC B04 C07 D16 S03
IN **MANSFIELD, L S**; **MURPHY, A J**; **ROSSANO, M G**; **VRABLE, R A**
PA (UNMS) UNIV MICHIGAN STATE
CYC 87
PI WO 2000049049 A1 20000824 (200053)* EN 64p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW
AU 2000034982 A 20000904 (200103)
US 6344337 B1 20020205 (200211)
ADT WO 2000049049 A1 WO 2000-US4379 20000218; AU 2000034982 A AU 2000-34982 20000218; US 6344337 B1 Provisional US 1999-120831P 19990219, Provisional US 1999-152193P 19990902, US 2000-506630 20000218
FDT AU 2000034982 A Based on WO 200049049
PRAI US 1999-152193P 19990902; US 1999-120831P 19990219; US 2000-506630 20000218
AB WO 200049049 A UPAB: 20020215
NOVELTY - Detection of **Sarcocystis neurona** in horses by identifying a specific **antibody**-antigen complex via an immunoassay is new.

DETAILED DESCRIPTION - Detection of **Sarcocystis neurona** in an equine in an immunoassay is improved by reacting a biological sample from the horse suspected of harboring the S. neurona with an **antibody** (Ab) which is selective in binding to an identifying S. neurona antigen (Ag) to form an Ab-Ag complex.

INDEPENDENT CLAIMS are also included for the following:

(1) a kit for detecting S. neurona in a biological sample from an equine;

(2) monoclonal **antibodies** against 16 plus or minus 4 kDa or 30 plus or minus 4 kDa antigens of S. neurona; and

(3) isolated DNA sequences encoding the 16 plus or minus 4 kDa and 30 plus or minus 4 kDa antigens of S. neurona.

USE - The methods and **antibodies** are useful for detecting

S. neurona (claimed) which causes equine protozoal myeloencephalitis, a neurological disorder in horses.
Dwg.0/0

L14 ANSWER 9 OF 12 WPIDS (C) 2003 THOMSON DERWENT DUPLICATE 6
AN 2000-292877 [25] WPIDS
DNN N2000-219631 DNC C2000-088472
TI Immunoassay for equine protozoal myeloencephalitis in horses uses specific **antibodies** to proteins derived from **Sarcocystis neurona**.
DC B04 C06 D16 S03
IN **MANSFIELD, L S**; **MURPHY, A J**; **ROSSANO, M G**
PA (UNMS) UNIV MICHIGAN STATE
CYC 83
PI WO 2000017640 A1 20000330 (200025)* EN 26p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW
AU 9954707 A 20000410 (200035)
US 6153394 A 20001128 (200063)
US 6489148 B1 20021203 (200301)
ADT WO 2000017640 A1 WO 1999-US17961 19990809; AU 9954707 A AU 1999-54707 19990809; US 6153394 A US 1998-156954 19980918; US 6489148 B1 Div ex US 1998-156954 19980918, US 2000-569434 20000512
FDT AU 9954707 A Based on WO 200017640; US 6489148 B1 Div ex US 6153394
PRAI US 1998-156954 19980918; US 2000-569434 20000512
AB WO 200017640 A UPAB: 20000524
NOVELTY - An improved immunoassay for detecting **Sarcocystis neurona** infection in equines, comprises reacting the **Sarcocystis neurona** protein with a non-labeled **antibody** to proteins of other Sarcocystis species, before the immunoassay, which inhibits non-specific binding of the labeled **antibody**, during the immunoassay.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a method for the detection of disease caused by Sarcocystis neurons in equines which comprises:

(a) isolating fluid from the equine which can contain parasite induced **antibodies** to **Sarcocystis neurona** proteins, indicating the presence of the **Sarcocystis neurona**;

(b) reacting the fluid with at least one identifying antigen of the Sarcocystis neurons protein bound on a substrate, where the substrate has been blocked with **antibodies** to Sarcocystis sp. other than Sarcocystis neurons, so that **antibodies** to **Sarcocystis neurona** antigen in the fluid are bound to the identifying antigen; and

(c) detecting the **antibodies** bound to the antigen;

(2) a kit for the detection of disease caused by **Sarcocystis neurona** comprising in separate containers:

(a) an identifying **antibody** able to specifically bind a **Sarcocystis neurona** protein; and

(b) a non-labeled **antibody** which is specific for a second protein of a Sarcocystis sp. other than **Sarcocystis neurona**; and

(3) a kit for the detection of disease caused by **Sarcocystis neurona** in equines comprising:

(a) a substrate with at least one identifying antigen to the **Sarcocystis neurona** bound on a surface of the substrate;

(b) **antibody** to a Sarcocystis sp. other than

Sarcocystis neurona; and

(c) at least one reagent for the detection of an **antibody** in a fluid of the equine which binds to the antigen of **Sarcocystis neurona**.

USE - The methods and kits are used to detect **antibodies** to proteins of **Sarcocystis neurona**, in an equine, (claimed), which causes myeloencephalitis in the equine.

ADVANTAGE - The method uses a non-labeled **antibody** to proteins of other Sarcocystis species to inhibit the non-specific binding of the labeled **antibody**, improving the accuracy of the assay.

Dwg.0/2

L14 ANSWER 10 OF 12 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2001:258224 BIOSIS
DN PREV200100258224
TI Immunoassay for equine protozoal myeloencephalitis in horses.
AU **Mansfield, Linda S. (1)**; **Murphy, Alice J.**; **Rossano, Mary G.**
CS (1) Bath, MI USA
ASSIGNEE: Board of Trustees operating Michigan State University
PI US 6153394 November 28, 2000
SO Official Gazette of the United States Patent and Trademark Office Patents, (Nov. 28, 2000) Vol. 1240, No. 4, pp. No Pagination. e-file. ISSN: 0098-1133.
DT Patent
LA English
AB An immunoassay for **Sarcocystis neurona** **antibodies** in equines is described. The immunoassay uses blocking of Sarcocystis antigens by **antibodies** to Sarcocystis sp. other than **Sarcocystis neurona** in connection with the immunoassay.

L14 ANSWER 11 OF 12 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
AN 2000-14646 BIOTECHDS
TI Detection of **Sarcocystis neurona**, which causes horse protozoan myeloencephalitis, in horse serum and cerebrospinal fluid comprises identifying a specific **antibody**-antigen complex via an immunoassay;
with use of monoclonal **antibodies**
AU **Mansfield L S**; **Rossano M G**; **Murphy A J**; **Vrable R A**
PA Univ.Michigan-State
LO East Lansing, MI, USA.
PI WO 2000049049 24 Aug 2000
AI WO 2000-US4379 18 Feb 2000
PRAI US 990152193 2 Sep 1999; US 1999-120831 19 Feb 1999
DT Patent
LA English
OS WPI: 2000-571969 [53]
AB Detection of **Sarcocystis neurona**, which causes equine protozoan myeloencephalitis in horses by identifying a specific **antibody**-antigen complex via an immunoassay, is claimed. Also claimed are: a kit for detecting S. neurona in a biological sample from a horse; monoclonal **antibodies** against antigens of s. neurona; and isolated DNA sequences encoding the antigens of S. neurona. The methods and **antibodies** are useful for detecting S. neurona which causes horse protozoan myeloencephalitis, a neurological disorder in horses. The labelled **antibody** against the antigen or the **antibody** in the **antibody**-antigen complex is provided for the detecting. The label is chosen from alkaline phosphatase (EC-3.1.3.1), horseradish peroxidase (EC-1.11.1.7), fluorescent compounds, luminescent compounds, colloidal gold and magnetic particles. The label is preferably biotin, which is reacted with peroxidase

```
                E ROSSANO MARY G/AU
L3              9 S E3
                E ROSSANO M G/AU
L4             25 S E3
                E MURPHY ALICE J/AU
L5             15 S E2 OR E3
                E MURPHY A J/AU
L6            337 S E3
                E VRABLE RUTH A/AU
L7             11 S E2 OR E3
                E VRABLE R A/AU
L8             23 S E2 OR E3
L9            496 S L1-L8
L10            39 S L9 AND SARCOCYSTIS NEURONA
L11             1 S L10 AND (16 KD OR 30 KD)
L12            51 S L9 AND ANTIBOD?
L13            26 S L10 AND ANTIBOD?
L14            12 DUP REM L13 (14 DUPLICATES REMOVED)

=> dup rem l10
PROCESSING COMPLETED FOR L10
L15            15 DUP REM L10 (24 DUPLICATES REMOVED)

=> d bib ab 1-15

L15  ANSWER 1 OF 15  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE
     1
AN   2003:159207  BIOSIS
DN   PREV200300159207
TI   A herd-level analysis of risk factors for antibodies to
     Sarcocystis neurona in Michigan equids.
AU   Rossano, M. G.; Kaneene, J. B. (1); Marteniuk, J. V.; Banks, B.
     D.; Schott, H. C., II; Mansfield, L. S.
CS   (1) College of Veterinary Medicine, Population Medicine Center, A-109
     Veterinary Medical Center, Michigan State University, East Lansing, MI,
     48824-1314, USA: kaneene@cvm.msu.edu USA
SO   Preventive Veterinary Medicine, (15 February 2003) Vol. 57, No. 1-2, pp.
     7-13. print.
     ISSN: 0167-5877.
DT   Article
LA   English
AB   Equine protozoal myeloencephalitis (EPM) is a neurological disease of
     horses and ponies caused by infection of the central nervous system with
     the protozoan parasite Sarcocystis neurona. A
     herd-level analysis of a cross-sectional study of serum antibodies to S.
     neurona in Michigan equids was conducted, using data collected in 1997 for
     study that included 1121 equids from 98 Michigan horse farms. Our
     objective was to identify specific herd-level risk factors associated with
     seropositivity. We tested associations between herd seroprevalence and
     various farm-management practices (including feed-storage methods and
     wildlife control). Multivariable models were developed for three strata
     based on relative opossum abundance (opossum districts). Herd
     seroprevalence ranged from 0 to 100% (median = 57%); No risk factor was
     significantly associated with herd seroprevalence at P ltoreq 0.05 in all
     opossum districts. Our results suggest that equids living in areas with
     large opossum populations might be infected with S. neurona from multiple
     sources.

L15  ANSWER 2 OF 15  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN   2003:67219  BIOSIS
DN   PREV200300067219
TI   Immunoassay for equine protozoal myeloencephalitis in horses.
AU   Mansfield, Linda S.; Murphy, Alice J. (1);
```

fluorescent antibody (IFA) test and a western blot test. Submission records were analyzed to determine descriptive statistics and test for associations between positive results of a test for S neurona and other variables in the data set. Results-10 of 196 (5%) samples yielded positive results for antibodies against S neurona by use of western blot analysis, whereas 27 samples yielded positive results by use of the IFA. No association was found between S neurona western blot test results and T gondii test results, age, sex, or the reason for T gondii testing. The S neurona IFA titer was positively and significantly associated with positive results of western blot analysis. Conclusions and Clinical Relevance-Domestic cats are not likely to play a substantial role as intermediate hosts in the natural life cycle of S neurona. Results indicate that natural infection of domestic cats may occur, and small animal practitioners should be aware of this fact when evaluating cats with neurologic disease. The S neurona IFA test had lower specificity than western blot analysis.

L15 ANSWER 5 OF 15 WPIDS (C) 2003 THOMSON DERWENT DUPLICATE 3
AN 2001-218486 [22] WPIDS
CR 2000-571969 [49]
DNC C2001-065294
TI Vaccinating equids against protozoal **Sarcocystis neurona** infections using unique antigens.
DC B04 C06 D16
IN **MANSFIELD, L S**; **MURPHY, A J**; **ROSSANO, M G**; **VRABLE, R A**
PA (UNMS) UNIV MICHIGAN STATE
CYC 88
PI WO 2001015708 A1 20010308 (200122)* EN 54p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW
AU 2000071087 A 20010326 (200137)
EP 1207889 A1 20020529 (200243) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
ADT WO 2001015708 A1 WO 2000-US24221 20000831; AU 2000071087 A AU 2000-71087 20000831; EP 1207889 A1 EP 2000-959829 20000831, WO 2000-US24221 20000831
FDT AU 2000071087 A Based on WO 200115708; EP 1207889 A1 Based on WO 200115708
PRAI US 2000-513086 20000224; US 1999-152193P 19990902
AB WO 200115708 A UPAB: 20020709
NOVELTY - Vaccinating equids against **Sarcocystis neurona** infections using polypeptide groups of unique 16 (+4) or 30 (+4) antigens of S. neurona, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(a) a vaccine (I) for providing passive immunity to **Sarcocystis neurona** infection, comprising antibodies against at least one group of a unique 16 (+4) or 30 (+4) antigen of S. neurona;

(b) a vaccine (II) for active immunization of an equid against a S. neurona infection, comprising at least one group of a unique 16 (+4) or 30 (+4) antigen of S. neurona;

(c) a vaccine (III) for protecting an equid from S. neurona infection comprising a DNA that encodes at least 1 group of a 16 (+4) kDa antigen and/or a 30 (+4) kDa antigen of S. neurona;

(d) a method (IV) for vaccinating an equid against a S. neurona infection, comprising:

(1) providing a recombinant antigen of S. neurona produced from a recombinant microorganism culture (the microorganism contains a DNA that

encodes at least one group of a 16 (+4) kDa antigen and/or 30 (+4) kDa antigen of S. neurona; and

(2) vaccinating the equid;

(e) a method (V) for vaccinating an equid against a S. neurona infection, comprising:

(1) providing a DNA in a carrier solution, a plasmid which encodes at least 1 group of a 16 (+4) kDa antigen and/or 30 (+4) kDa antigen of **Sarcocystis neurona**; and

(2) vaccinating the equid with the DNA in the carrier solution;

(f) a method (VI) of providing passive immunity to a S. neurona infection in a equid, comprising:

(1) providing antibodies against at least 1 group of a 16 (+4) kDa antigen and/or 30 (+4) kDa antigen of S. neurona (the antibodies may be monoclonal or polyclonal); and

(2) inoculating the equid;

(g) a method (VII) for producing a polypeptide, comprising:

(1) providing a microorganism in a culture containing a DNA encoding a fusion polypeptide comprising at least 1 group of a 16 (+4) kDa antigen and/or 30 (+4) kDa antigen of S. neurona and a polypeptide that facilitates isolation of the fusion polypeptide;

(2) culturing the microorganism in a culture to produce the fusion polypeptide; and

(3) isolating the fusion polypeptide;

(h) a method (VIII) for producing an antibody comprising:

(1) providing a microorganism in a culture containing DNA encoding a fusion polypeptide comprising at least 1 group of a 16 (+4) kDa antigen and/or 30 (+4) kDa antigen of S. neurona and a polypeptide that facilitates isolation of the fusion polypeptide;

(2) culturing the microorganisms in a culture to produce the fusion polypeptide;

(3) isolating the fusion polypeptide;

(4) producing the antibody from the polypeptide;

(i) a monoclonal antibody (IX) that selectively binds to a 16 (+4) kDa antigen and/or 30 (+4) kDa antigen;

(j) an isolated DNA (X) encoding a monoclonal antibody that selectively binds to a 16 (+4) kDa antigen and/or 30 (+4) kDa antigen;

(k) a bacterial clone (XI) containing a plasmid comprising a DNA encoding a 16 (+4) kDa antigen and/or 30 (+4) kDa antigen of S. neurona;

(l) a vaccine (XII) for an equid comprising an isolated recombinant protein encoded by a cDNA produced from mRNA of S. neurona encoding a 16 (+4) kDa antigen and/or 30 (+4) kDa antigen;

(m) a vaccine (XIII) for an equid comprising a recombinant virus vector containing DNA encoding a 16 (+4) kDa antigen and/or 30 (+4) kDa antigen of S. neurona;

(n) a DNA vaccine (XIV) for an equid comprising a plasmid containing DNA encoding a 16 (+4) kDa antigen and/or 30 (+4) kDa antigen of S. neurona; and

(o) a method (XV) for protecting an equid against S. neurona which comprises providing a vaccine that when injected into the equid causes the equid to produce antibodies against a 16 (+4) kDa antigen and/or 30 (+4) kDa antigen of S. neurona (the antibodies prevent infection by the Sarcocystis neurona).

ACTIVITY - Antiparasitic.

No biological data given.

MECHANISM OF ACTION - Vaccine.

USE - The vaccines and methods are used for protecting equids against infections by the protozoan parasite Sarcocystis neurona.

Dwg.0/0

L15 ANSWER 6 OF 15 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI

AN 2001-07735 BIOTECHDS

TI Vaccinating equids against protozoal **Sarcocystis neurona** infections using antigens;

Sarcocystis neurona nucleic acid vaccine and recombinant vaccine

AU **Mansfield L S; Rossano M G; Murphy A J; Vrable R A**

PA Univ.Michigan-State

LO East Lansing, MI, USA.

PI WO 2001015708 8 Mar 2001

AI WO 2000-US24221 31 Aug 2000

PRAI US 2000-513086 24 Feb 2000; US 1999-152193 2 Sep 1999

DT Patent

LA English

OS WPI: 2001-218486 [22]

AB A method for vaccinating equids against **Sarcocystis neurona** infection is claimed. It involves using protein groups of unique 16(+4) or 30(+4) antigens of S. neurona. Also claimed are: a vaccine (I) for providing passive immunity to **Sarcocystis neurona** infection; a vaccine (II) for active immunization of an equid against a S. neurona infection; a vaccine (III) for protecting an equid from S. neuronna infection; a method (IV or V) for vaccinating an equid against a S. neurona infection; a method (VI) of providing passive immunity to a S. neurona infection; a method (VII) for producing a protein (e.g. glutathione-transferase); a method (VIII) for producing an antibody; providing a microorganism in a culture containing DNA encoding a fusion protein; a monoclonal antibody (IX); an isolated DNA (X); a bacterial clone (XI); a vaccine (XII) for an equid containing an isolated recombinant protein; a vaccine (XIII or XIV) for an equid containing recombinant virus vector containing DNA; and a method (XV) for protecting an equid against S. neurona. The vaccines and methods are used for protecting equids against infection by the protozoon parasite Srcocystis neurona. (54pp)

L15 ANSWER 7 OF 15 CABA COPYRIGHT 2003 CABI

AN 2001:140181 CABA

DN 20013139279

TI The effects of pyrantel tartrate on **Sarcocystis neurona** merozoite viability

AU Kruttlin, E. A.; **Rossano, M. G.**; **Murphy, A. J.**; **Vrable, R. A.**; Kaneene, J. B.; Schott, H. C., II; **Mansfield, L. S.**

CS Department of Large Animal Clinical Sciences, D201 Veterinary Medicine Center, College of Veterinary Medicine, Michigan State University, East Lansing, MI 48824, USA.

SO Veterinary Therapeutics, (2001) Vol. 2, No. 3, pp. 268-276. 21 ref. ISSN: 1528-3593

DT Journal

LA English

AB S. neurona is the etiologic agent of equine protozoal myeloencephalitis, a neurologic disease of horses. The present study was designed to test the hypothesis that pyrantel tartrate can kill S. neurona merozoites growing in equine dermal cell culture. S. neurona merozoites were exposed to a range of concentrations of pyrantel tartrate or sodium tartrate ranging from 0.001 to 0.01 M. Merozoites were then placed onto equine dermal cell cultures and incubated for 2 weeks to check for viability. At 1 and 2 weeks after inoculation, plaque counts were compared between treatments and, between treatments and controls. Merozoites exposed to concentrations of pyrantel tartrate higher than 0.0025 M (8.91x10-4 g/ml) did not produce plaques in equine dermal cells, whereas those exposed to similar concentrations of the tartrate salt or medium alone produced significant numbers of plaques. These results that pyrantel tartrate has activity against S. neurona merozoites in vitro and suggest that it may have activity against the sporozoite stage of the parasite found in the equine gut.

L15 ANSWER 8 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 4
AN 2001:169884 BIOSIS
DN PREV200100169884
TI Comparison of **Sarcocystis neurona** isolates derived from horse neural tissue.
AU **Mansfield, L. S. (1)**; Schott, H. C., II; **Murphy, A. J.**; **Rossano, M. G.**; Tanhauser, S. M.; Patterson, J. S.; Nelson, K.; Ewart, S. L.; Marteniuk, J. V.; Bowman, D. D.; Kaneene, J. B.
CS (1) Department of Large Animal Clinical Sciences, College of Veterinary Medicine, Michigan State University, East Lansing, MI, 48824: mansfie4@cvm.msu.edu USA
SO Veterinary Parasitology, (26 February, 2001) Vol. 95, No. 2-4, pp. 167-178. print.
ISSN: 0304-4017.
DT Article
LA English
SL English
AB **Sarcocystis neurona** is a protozoan parasite that can cause neurological deficits in infected horses. The route of transmission is by fecal-oral transfer of sporocysts from opossums. However, the species identity and the lifecycle are not completely known. In this study, Sarcocystis merozoites from eight isolates obtained from Michigan horses were compared to S. neurona from a California horse (UCD1), Sarcocystis from a grackle (Cornell), and five Sarcocystis isolates from feral opossums from Michigan. Comparisons were made using several techniques. SDS-PAGE analysis with silver staining showed that Sarcocystis spp. from the eight horses appeared the same, but different from the grackle isolate. One Michigan horse isolate (MIH6) had two bands at 72 and 25 kDa that were more prominent than the UCD1 isolate and other Michigan horse isolates. Western blot analysis showed that merozoites of eight of eight equine-derived isolates, and the UCD1 S. neurona isolate had similar bands when developed with serum or CSF of an infected horse. Major bands were seen at 60, 44, 30, and 16 kDa. In the grackle (Cornell) isolate, bands were seen at 60, 44, 29, and 16 kDa. DNA from merozoites of each of the eight equine-derived isolates and the grackle-derived isolate produced a 334 bp PCR product (Tanhauser et al., 1999). Restriction fragment length polymorphism (RFLP) analysis of these horse isolates showed banding patterns characteristic for S. neurona. The grackle (Cornell) isolate had an RFLP banding pattern characteristic of other S. falcatula species. Finally, electron microscopy examining multiple merozoites of each of these eight horse isolates showed similar morphology, which differed from the grackle (Cornell) isolate. We conclude that the eight Michigan horse isolates are S. neurona species and the grackle isolate is an S. falcatula species.

L15 ANSWER 9 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 5
AN 2001:135932 BIOSIS
DN PREV200100135932
TI The seroprevalence of antibodies to **Sarcocystis neurona** in Michigan equids.
AU **Rossano, M. G.**; Kaneene, J. B. (1); Marteniuk, J. V.; Banks, B. D.; Schott, H. C., II; **Mansfield, L. S.**
CS (1) Population Medicine Center, College of Veterinary Medicine, A-109 Veterinary Medical Center, Michigan State University, East Lansing, MI, 48824-1314: kaneene@cvm.msu.edu USA
SO Preventive Veterinary Medicine, (29 January, 2001) Vol. 48, No. 2, pp. 113-128. print.
ISSN: 0167-5877.
DT Article
LA English
SL English

AB A cross-sectional study of serum antibodies to **Sarcocystis neurona** (the etiologic agent of equine protozoal myeloencephalitis, EPM) was performed on Michigan equids. Our objectives were to determine the seroprevalence of antibodies to S. neurona in Michigan equids and to identify specific risk factors for seropositivity. A random, weighted sample of Michigan horse farms (stratified by the state's opossum (Didelphis virginiana) population and the number of equids on each operation) was selected. Ninety-eight equine-operation owners agreed to participate, and blood collection occurred from late March through October of 1997. Data regarding the 98 farms' feeding and management practices were collected, as well as descriptive data for each of the 1121 individual horses. Serum samples were tested for antibodies to S. neurona using a Western blot test. The true seroprevalence of antibodies specific to S. neurona was estimated to be 60%. Chi-square analysis showed that seroprevalence was lowest in the colder parts of the state that had the fewest opossums ($P < 0.0001$). In two multivariable logistic-regression analyses with random effects grouped by herd, age and exposure to pasture were associated with increased odds of seropositivity, and feeding of sweet feed (grains mixed with molasses) was associated with decreased odds of testing positive. No association was found between farm size, animal gender, hay types, horse-housing types or exposure to natural surface water and seropositivity.

L15 ANSWER 10 OF 15 WPIDS (C) 2003 THOMSON DERWENT DUPLICATE 6
AN 2000-571969 [53] WPIDS
CR 2001-218486 [22]
DNN N2000-423167 DNC C2000-170452
TI Detection of **Sarcocystis neurona**, which causes equine protozoal myeloencephalitis, in horse serum and cerebrospinal fluid comprises identifying a specific antibody-antigen complex via an immunoassay.
DC B04 C07 D16 S03
IN **MANSFIELD, L S**; **MURPHY, A J**; **ROSSANO, M G**; **VRABLE, R A**
PA (UNMS) UNIV MICHIGAN STATE
CYC 87
PI WO 2000049049 A1 20000824 (200053)* EN 64p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW
AU 2000034982 A 20000904 (200103)
US 6344337 B1 20020205 (200211)
ADT WO 2000049049 A1 WO 2000-US4379 20000218; AU 2000034982 A AU 2000-34982 20000218; US 6344337 B1 Provisional US 1999-120831P 19990219, Provisional US 1999-152193P 19990902, US 2000-506630 20000218
FDT AU 2000034982 A Based on WO 200049049
PRAI US 1999-152193P 19990902; US 1999-120831P 19990219; US 2000-506630 20000218
AB WO 200049049 A UPAB: 20020215
NOVELTY - Detection of **Sarcocystis neurona** in horses by identifying a specific antibody-antigen complex via an immunoassay is new.

DETAILED DESCRIPTION - Detection of **Sarcocystis neurona** in an equine in an immunoassay is improved by reacting a biological sample from the horse suspected of harboring the S. neurona with an antibody (Ab) which is selective in binding to an identifying S. neurona antigen (Ag) to form an Ab-Ag complex.

INDEPENDENT CLAIMS are also included for the following:

(1) a kit for detecting S. neurona in a biological sample from an equine;

(2) monoclonal antibodies against 16 plus or minus 4 kDa or 30 plus or minus 4 kDa antigens of S. neurona; and

(3) isolated DNA sequences encoding the 16 plus or minus 4 kDa and 30 plus or minus 4 kDa antigens of S. neurona.

USE - The methods and antibodies are useful for detecting S. neurona (claimed) which causes equine protozoal myeloencephalitis, a neurological disorder in horses.

Dwg.0/0

L15 ANSWER 11 OF 15 WPIDS (C) 2003 THOMSON DERWENT DUPLICATE 7
AN 2000-292877 [25] WPIDS
DNN N2000-219631 DNC C2000-088472
TI Immunoassay for equine protozoal myeloencephalitis in horses uses specific antibodies to proteins derived from **Sarcocystis neurona**

DC B04 C06 D16 S03
IN **MANSFIELD, L S; MURPHY, A J; ROSSANO, M G**
PA (UNMS) UNIV MICHIGAN STATE
CYC 83
PI WO 2000017640 A1 20000330 (200025)* EN 26p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW
AU 9954707 A 20000410 (200035)
US 6153394 A 20001128 (200063)
US 6489148 B1 20021203 (200301)
ADT WO 2000017640 A1 WO 1999-US17961 19990809; AU 9954707 A AU 1999-54707 19990809; US 6153394 A US 1998-156954 19980918; US 6489148 B1 Div ex US 1998-156954 19980918, US 2000-569434 20000512
FDT AU 9954707 A Based on WO 200017640; US 6489148 B1 Div ex US 6153394
PRAI US 1998-156954 19980918; US 2000-569434 20000512
AB WO 200017640 A UPAB: 20000524

NOVELTY - An improved immunoassay for detecting **Sarcocystis neurona** infection in equines, comprises reacting the **Sarcocystis neurona** protein with a non-labeled antibody to proteins of other Sarcocystis species, before the immunoassay, which inhibits non-specific binding of the labeled antibody, during the immunoassay.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a method for the detection of disease caused by Sarcocystis neurons in equines which comprises:

(a) isolating fluid from the equine which can contain parasite induced antibodies to **Sarcocystis neurona** proteins, indicating the presence of the **Sarcocystis neurona**;

(b) reacting the fluid with at least one identifying antigen of the Sarcocystis neurons protein bound on a substrate, where the substrate has been blocked with antibodies to Sarcocystis sp. other than Sarcocystis neurons, so that antibodies to **Sarcocystis neurona** antigen in the fluid are bound to the identifying antigen; and

(c) detecting the antibodies bound to the antigen;

(2) a kit for the detection of disease caused by **Sarcocystis neurona** comprising in separate containers:

(a) an identifying antibody able to specifically bind a **Sarcocystis neurona** protein; and

(b) a non-labeled antibody which is specific for a second protein of a Sarcocystis sp. other than **Sarcocystis neurona**; and

(3) a kit for the detection of disease caused by **Sarcocystis neurona** in equines comprising:

(a) a substrate with at least one identifying antigen to the

Sarcocystis neurona bound on a surface of the substrate;
(b) antibody to a Sarcocystis sp. other than **Sarcocystis neurona**; and
(c) at least one reagent for the detection of an antibody in a fluid of the equine which binds to the antigen of **Sarcocystis neurona**.
USE - The methods and kits are used to detect antibodies to proteins of **Sarcocystis neurona**, in an equine, (claimed), which causes myeloencephalitis in the equine.
ADVANTAGE - The method uses a non-labeled antibody to proteins of other Sarcocystis species to inhibit the non-specific binding of the labeled antibody, improving the accuracy of the assay.
Dwg.0/2

L15 ANSWER 12 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2001:258224 BIOSIS
DN PREV200100258224
TI Immunoassay for equine protozoal myeloencephalitis in horses.
AU **Mansfield, Linda S. (1); Murphy, Alice J.; Rossano, Mary G.**
CS (1) Bath, MI USA
ASSIGNEE: Board of Trustees operating Michigan State University
PI US 6153394 November 28, 2000
SO Official Gazette of the United States Patent and Trademark Office Patents, (Nov. 28, 2000) Vol. 1240, No. 4, pp. No Pagination. e-file. ISSN: 0098-1133.
DT Patent
LA English
AB An immunoassay for **Sarcocystis neurona** antibodies in equines is described. The immunoassay uses blocking of Sarcocystis antigens by antibodies to Sarcocystis sp. other than **Sarcocystis neurona** in connection with the immunoassay.

L15 ANSWER 13 OF 15 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
AN 2000-14646 BIOTECHDS
TI Detection of **Sarcocystis neurona**, which causes horse protozoan myeloencephalitis, in horse serum and cerebrospinal fluid comprises identifying a specific antibody-antigen complex via an immunoassay;
with use of monoclonal antibodies
AU **Mansfield L S; Rossano M G; Murphy A J; Vrable R A**
PA Univ.Michigan-State
LO East Lansing, MI, USA.
PI WO 2000049049 24 Aug 2000
AI WO 2000-US4379 18 Feb 2000
PRAI US 990152193 2 Sep 1999; US 1999-120831 19 Feb 1999
DT Patent
LA English
OS WPI: 2000-571969 [53]
AB Detection of **Sarcocystis neurona**, which causes equine protozoan myeloencephalitis in horses by identifying a specific antibody-antigen complex via an immunoassay, is claimed. Also claimed are: a kit for detecting S. neurona in a biological sample from a horse; monoclonal antibodies against antigens of s. neurona; and isolated DNA sequences encoding the antigens of S. neurona. The methods and antibodies are useful for detecting S. neurona which causes horse protozoan myeloencephalitis, a neurological disorder in horses. The labelled antibody against the antigen or the antibody in the antibody-antigen complex is provided for the detecting. The label is chosen from alkaline phosphatase (EC-3.1.3.1), horseradish peroxidase (EC-1.11.1.7), fluorescent compounds, luminescent compounds, colloidal gold and magnetic particles. The label is preferably biotin, which is

LA English
SL English
AB **Sarcocystis neurona** is a protozoan parasite that causes a neurological disease in horses called equine protozoal myeloencephalitis. The route of transmission is speculated to be by fecal-oral transfer of sporocysts shed from opossums. Controversy exists regarding both the natural life cycle for this parasite as well as the species identity of opossum Sarcocystis. To provide stage-specific material for species comparison, 27 opossums from southern Michigan were screened for Sarcocystis spp. sporocysts. Seven opossums were positive for Sarcocystis sporocysts by fecal flotation. A simplified, effective technique for isolation, excystation, and culture of opossum Sarcocystis sp. from mucosal scrapings was developed. All 7 Sarcocystis sp. isolates were successfully cultured to grow long term in equine dermal cells to the merozoite stage. Merozoites were observed between 5 and 15 days after inoculation. In conclusion, opossums shed Sarcocystis sp. sporocysts that may be manipulated t o excyst and grow in vitro in equine dermal cell lines to the merozoite stage using the simplified technique described.

=> s sarcocystis neurona
L16 905 SARCOCYSTIS NEURONA

=> s l16 and (12 kd or 13 kd or 14 kd or 15 kd or 16 kd or 17 kd or 18 kd or 19 kd or 20 kd)
7 FILES SEARCHED...
L17 2 L16 AND (12 KD OR 13 KD OR 14 KD OR 15 KD OR 16 KD OR 17 KD OR 18 KD OR 19 KD OR 20 KD)

=> d bib ab 1-2

L17 ANSWER 1 OF 2 MEDLINE
AN 2000152631 MEDLINE
DN 20152631 PubMed ID: 10690772
TI Improvement of western blot test specificity for detecting equine serum antibodies to **Sarcocystis neurona**.
AU Rossano M G; Mansfield L S; Kaneene J B; Murphy A J; Brown C M; Schott H C 2nd; Fox J C
CS Animal Health Diagnostic Laboratory, The Population Medicine Center, Michigan State University, East Lansing 48824, USA.
SO JOURNAL OF VETERINARY DIAGNOSTIC INVESTIGATION, (2000 Jan) 12 (1) 28-32. Journal code: 9011490. ISSN: 1040-6387.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200003
ED Entered STN: 20000330
Last Updated on STN: 20000330
Entered Medline: 20000321
AB Equine protozoal myeloencephalitis (EPM) is a neurological disease of horses and ponies caused by the apicomplexan protozoan parasite **Sarcocystis neurona**. The purposes of this study were to develop the most stringent criteria possible for a positive test result, to estimate the sensitivity and specificity of the EPM Western blot antibody test, and to assess the ability of bovine antibodies to Sarcocystis cruzi to act as a blocking agent to minimize false-positive results in the western blot test for S. neurona. **Sarcocystis neurona** merozoites harvested from equine dermal cell culture were heat denatured, and the proteins were separated by sodium dodecyl sulfate-polyacrylamide gel electrophoresis in a 12-20% linear gradient gel. Separated proteins were electrophoretically transferred to polyvinylidene fluoride membranes and blocked in 1% bovine serum albumin

and 0.5% Tween-Tris-buffered saline. Serum samples from 6 horses with S. neurona infections (confirmed by culture from neural tissue) and 57 horses without infections (horses from the Eastern Hemisphere, where S. neurona does not exist) were tested by Western blot. Horses from both groups had reactivity to the 62-, 30-, 16-, 13-, 11-, 10.5-, and 10-kD bands. Testing was repeated with another step. Blots were treated with bovine S. cruzi antibodies prior to loading the equine samples. After this modification of the Western blot test, positive infection status was significantly associated with reactivity to the 30- and **16-kD** bands ($P<0.001$, Fisher's exact test). The S. cruzi antibody-blocked Western blot had a sample sensitivity of 100% and sample specificity of 98%. It is concluded that the specificity of the Western blot test is improved by blocking proteins not specific to S. neurona and using reactivity to the 30- and **16-kD** bands as the criterion for a positive test.

L17 ANSWER 2 OF 2 WPIDS (C) 2003 THOMSON DERWENT
AN 1999-571872 [48] WPIDS
DNN N1999-421433 DNC C1999-166894
TI Biologically pure culture of equine Neospora, used as source of vaccines and diagnostic reagents.
DC B04 C06 C07 D16 S03
IN BARR, B C; CONRAD, P A; MARSH, A E
PA (REGC) UNIV CALIFORNIA
CYC 23
PI WO 9947927 A1 19990923 (199948)* EN 47p
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: AU CA JP
AU 9931874 A 19991011 (200008)
US 6071737 A 20000606 (200033)
EP 1064550 A1 20010103 (200102) EN
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
JP 2002509702 W 20020402 (200225) 47p
ADT WO 9947927 A1 WO 1999-US5754 19990316; AU 9931874 A AU 1999-31874 19990316; US 6071737 A US 1998-42600 19980316; EP 1064550 A1 EP 1999-913906 19990316, WO 1999-US5754 19990316; JP 2002509702 W WO 1999-US5754 19990316, JP 2000-537071 19990316
FDT AU 9931874 A Based on WO 9947927; EP 1064550 A1 Based on WO 9947927; JP 2002509702 W Based on WO 9947927
PRAI US 1998-42600 19980316
AB WO 9947927 A UPAB: 19991122
NOVELTY - Biologically pure culture of equine Neospora, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(a) detecting antibodies (Ab) specifically reactive with equine Neospora antigens (Ag) by forming an Ab-Ag complex;

(b) detecting Neospora by forming a complex with an antibody (Ab1) specifically reactive with Neospora antigen;

(c) detecting Neospora-specific nucleic acid (I) by hybridization with a specific oligonucleotide probe; and

(d) pharmaceutical composition containing equine Neospora immunogen and a carrier.

ACTIVITY - Antiprotozoal.

MECHANISM OF ACTION - Induction of a specific immune response.

USE - Immunogens (optionally expressed from gene therapy vectors) from equine Neospora are used in vaccines for treatment or prevention of Neospora infection in horses and other animals. Neospora is a causative agent of equine protozoal myeloencephalitis (EPM). Detection of Neospora-specific antigens, antibodies or nucleic acid (by usual immunoassay or hybridization tests) is used to diagnose infection. Antibodies (Ab) specific for equine Neospora are used for diagnosis; to select candidate immunogens for vaccine development; to isolate proteins; to screen DNA libraries and as therapeutic/prophylactic agents.

ADVANTAGE - Reagents specific for equine Neospora allow differentiation between equine protozoal myeloencephalitis caused by Neospora and **Sarcocystis neurona**. These pathogens require different treatments and treatment of Neospora is only effective if applied before the parasite has formed cysts. The vaccines also prevent shedding of oocysts by animals known to be infected.
Dwg.0/2

```
=> s l16 and (26 kd or 27 kd or 28 kd or 29 kd or 30 kd or 31 kd or 32 kd or 33 kd
or 34 kd)
L18           0 L16 AND (26 KD OR 27 KD OR 28 KD OR 29 KD OR 30 KD OR 31 KD OR
                32 KD OR 33 KD OR 34 KD)

=> d his

     (FILE 'HOME' ENTERED AT 14:49:07 ON 15 MAY 2003)

     FILE 'BIOSIS, MEDLINE, AGRICOLA, EMBASE, CABA, WPIDS, JAPIO, BIOTECHDS,
     LIFESCI, CAPLUS' ENTERED AT 14:49:30 ON 15 MAY 2003
                 E MANSFIELD LINDA S/AU
L1            30 S E2-E3
                 E MANSFIELD L S/AU
L2           139 S E3
                 E ROSSANO MARY G/AU
L3             9 S E3
                 E ROSSANO M G/AU
L4            25 S E3
                 E MURPHY ALICE J/AU
L5            15 S E2 OR E3
                 E MURPHY A J/AU
L6           337 S E3
                 E VRABLE RUTH A/AU
L7            11 S E2 OR E3
                 E VRABLE R A/AU
L8            23 S E2 OR E3
L9           496 S L1-L8
L10           39 S L9 AND SARCOCYSTIS NEURONA
L11            1 S L10 AND (16 KD OR 30 KD)
L12           51 S L9 AND ANTIBOD?
L13           26 S L10 AND ANTIBOD?
L14           12 DUP REM L13 (14 DUPLICATES REMOVED)
L15           15 DUP REM L10 (24 DUPLICATES REMOVED)
L16          905 S SARCOCYSTIS NEURONA
L17            2 S L16 AND (12 KD OR 13 KD OR 14 KD OR 15 KD OR 16 KD OR 17 KD
L18            0 S L16 AND (26 KD OR 27 KD OR 28 KD OR 29 KD OR 30 KD OR 31 KD

=> s l16 and molecular weight
L19           5 L16 AND MOLECULAR WEIGHT

=> s l19 and antibod?
L20           3 L19 AND ANTIBOD?

=> d bib ab 1-3

L20  ANSWER 1 OF 3     MEDLINE
AN   2002085433     MEDLINE
DN   21671299   PubMed ID: 11812499
TI   Molecular characterisation of a major 29 kDa surface antigen of
     Sarcocystis neurona.
AU   Ellison Siobhan P; Omara-Opyene A Levi; Yowell Charles A; Marsh Antoinette
     E; Dame John B
CS   Department of Pathobiology, University of Florida, P.O. Box 110880,
```

Gainesville, FL 32611-0880, USA.
SO INTERNATIONAL JOURNAL FOR PARASITOLOGY, (2002 Feb) 32 (2) 217-25.
Journal code: 0314024. ISSN: 0020-7519.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS GENBANK-AF397896; GENBANK-AF401682
EM 200205
ED Entered STN: 20020129
Last Updated on STN: 20020517
Entered Medline: 20020516
AB A gene encoding a major 29 kDa surface antigen from **Sarcocystis neurona**, the primary causative agent of equine protozoal myeloencephalitis (EPM), was cloned, sequenced, and expressed as a recombinant protein. A cDNA library was prepared in the expression vector lambda ZAP from polyA+mRNA isolated from S. neurona merozoites cultivated in vitro. Random sequencing of 96 clones identified a clone of an abundant transcript having a translated amino acid sequence with 30% identity to the 31-kDa surface antigen of Sarcocystis muris cyst merozoites. Southern blot analysis indicated that the corresponding gene exists in low copy number within the S. neurona genome, but RNA blot analysis and other data indicated that the gene transcript is highly abundant. The sequence of the cDNA clone encoded an open reading frame specifying a polypeptide of 276 amino acids with a predicted size of 28.7 kDa. The deduced amino acid sequence displayed a hypothetical N-terminal signal peptide sequence followed by a polypeptide containing 12 cysteines. The coding region of the cDNA insert was subcloned into the expression vector pET14b, and a fusion protein expressed. The recombinant polypeptide was recognised by mAb 2A7 and mAb 1631, directed against a 29 kDa native protein found on the surface of cultured merozoites. **Antibodies** in serum and cerebrospinal fluid from a horse with EPM recognised a 29 kDa native protein of S. neurona merozoites and the 29 kDa recombinant protein. This S. neurona surface antigen is named SnSAG1.

L20 ANSWER 2 OF 3 MEDLINE
AN 2001354018 MEDLINE
DN 21127318 PubMed ID: 11223200
TI Immunoconversion against **Sarcocystis neurona** in normal and dexamethasone-treated horses challenged with S. neurona sporocysts.
AU Cutler T J; MacKay R J; Ginn P E; Gillis K; Tanhauser S M; LeRay E V; Dame J B; Greiner E C
CS Department of Pathobiology, PO Box 100880, College of Veterinary Medicine, University of Florida, Gainesville 32610, USA.
SO VETERINARY PARASITOLOGY, (2001 Feb 26) 95 (2-4) 197-210.
Journal code: 7602745. ISSN: 0304-4017.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200106
ED Entered STN: 20010625
Last Updated on STN: 20010625
Entered Medline: 20010621
AB Equine protozoal myeloencephalitis is a common neurologic disease of horses in the Americas usually caused by **Sarcocystis neurona**. To date, the disease has not been induced in horses using characterized sporocysts from Didelphis virginiana, the definitive host. S. neurona sporocysts from 15 naturally infected opossums were fed to horses seronegative for **antibodies** against S. neurona. Eight horses were given 5x10(5) sporocysts daily for 7 days. Horses were examined for abnormal clinical signs, and blood and cerebrospinal fluid were harvested at intervals for 90 days after the first day of challenge

=> s l16 and kd
L22 3 L16 AND KD

=> d bib ab 1-3

L22 ANSWER 1 OF 3 MEDLINE
AN 2000152631 MEDLINE
DN 20152631 PubMed ID: 10690772
TI Improvement of western blot test specificity for detecting equine serum antibodies to **Sarcocystis neurona**.
AU Rossano M G; Mansfield L S; Kaneene J B; Murphy A J; Brown C M; Schott H C 2nd; Fox J C
CS Animal Health Diagnostic Laboratory, The Population Medicine Center, Michigan State University, East Lansing 48824, USA.
SO JOURNAL OF VETERINARY DIAGNOSTIC INVESTIGATION, (2000 Jan) 12 (1) 28-32. Journal code: 9011490. ISSN: 1040-6387.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200003
ED Entered STN: 20000330
Last Updated on STN: 20000330
Entered Medline: 20000321
AB Equine protozoal myeloencephalitis (EPM) is a neurological disease of horses and ponies caused by the apicomplexan protozoan parasite **Sarcocystis neurona**. The purposes of this study were to develop the most stringent criteria possible for a positive test result, to estimate the sensitivity and specificity of the EPM Western blot antibody test, and to assess the ability of bovine antibodies to Sarcocystis cruzi to act as a blocking agent to minimize false-positive results in the western blot test for S. neurona. **Sarcocystis neurona** merozoites harvested from equine dermal cell culture were heat denatured, and the proteins were separated by sodium dodecyl sulfate-polyacrylamide gel electrophoresis in a 12-20% linear gradient gel. Separated proteins were electrophoretically transferred to polyvinylidene fluoride membranes and blocked in 1% bovine serum albumin and 0.5% Tween-Tris-buffered saline. Serum samples from 6 horses with S. neurona infections (confirmed by culture from neural tissue) and 57 horses without infections (horses from the Eastern Hemisphere, where S. neurona does not exist) were tested by Western blot. Horses from both groups had reactivity to the 62-, 30-, 16-, 13-, 11-, 10.5-, and 10-**kD** bands. Testing was repeated with another step. Blots were treated with bovine S. cruzi antibodies prior to loading the equine samples. After this modification of the Western blot test, positive infection status was significantly associated with reactivity to the 30- and 16-**kD** bands ($P<0.001$, Fisher's exact test). The S. cruzi antibody-blocked Western blot had a sample sensitivity of 100% and sample specificity of 98%. It is concluded that the specificity of the Western blot test is improved by blocking proteins not specific to S. neurona and using reactivity to the 30- and 16-**kD** bands as the criterion for a positive test.

L22 ANSWER 2 OF 3 MEDLINE
AN 93222344 MEDLINE
DN 93222344 PubMed ID: 8466988
TI Equine protozoal myeloencephalitis: antigen analysis of cultured **Sarcocystis neurona** merozoites.
AU Granstrom D E; Dubey J P; Davis S W; Fayer R; Fox J C; Poonacha K B; Giles R C; Comer P F
CS Department of Veterinary Science, University of Kentucky, Lexington 40546-0099.

SO JOURNAL OF VETERINARY DIAGNOSTIC INVESTIGATION, (1993 Jan) 5 (1) 88-90.
Journal code: 9011490. ISSN: 1040-6387.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199305
ED Entered STN: 19930521
Last Updated on STN: 19930521
Entered Medline: 19930510
AB Antigens of cultured **Sarcocystis neurona** merozoites were examined using immunoblot analysis. Blotted proteins were probed with S. cruzi, S. muris, and S. neurona antisera produced in rabbits, S. fayeri (pre- and post-infection) and S. neurona (pre- and post-inoculation) sera produced in horses, immune sera from 7 histologically confirmed cases of equine protozoal myeloencephalitis (EPM), and pre-suckle serum from a newborn foal. Eight proteins, 70, 24, 23.5, 22.5, 13, 11, 10.5, and 10 **Kd**, were detected only by S. neurona antiserum and/or immune serum from EPM-affected horses. Equine sera were titered by the indirect immunofluorescent antibody (IFA) method using air-dried, cultured S. neurona merozoites. Anti-Sarcocystis IFA titers were found in horses with or without EPM. Serum titers did not correspond to the number of specific bands recognized on immunoblots.

L22 ANSWER 3 OF 3 WPIDS (C) 2003 THOMSON DERWENT
AN 1999-571872 [48] WPIDS
DNN N1999-421433 DNC C1999-166894
TI Biologically pure culture of equine Neospora, used as source of vaccines and diagnostic reagents.
DC B04 C06 C07 D16 S03
IN BARR, B C; CONRAD, P A; MARSH, A E
PA (REGC) UNIV CALIFORNIA
CYC 23
PI WO 9947927 A1 19990923 (199948)* EN 47p
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: AU CA JP
AU 9931874 A 19991011 (200008)
US 6071737 A 20000606 (200033)
EP 1064550 A1 20010103 (200102) EN
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
JP 2002509702 W 20020402 (200225) 47p
ADT WO 9947927 A1 WO 1999-US5754 19990316; AU 9931874 A AU 1999-31874 19990316; US 6071737 A US 1998-42600 19980316; EP 1064550 A1 EP 1999-913906 19990316, WO 1999-US5754 19990316; JP 2002509702 W WO 1999-US5754 19990316, JP 2000-537071 19990316
FDT AU 9931874 A Based on WO 9947927; EP 1064550 A1 Based on WO 9947927; JP 2002509702 W Based on WO 9947927
PRAI US 1998-42600 19980316
AB WO 9947927 A UPAB: 19991122
NOVELTY - Biologically pure culture of equine Neospora, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(a) detecting antibodies (Ab) specifically reactive with equine Neospora antigens (Ag) by forming an Ab-Ag complex;
(b) detecting Neospora by forming a complex with an antibody (Ab1) specifically reactive with Neospora antigen;
(c) detecting Neospora-specific nucleic acid (I) by hybridization with a specific oligonucleotide probe; and
(d) pharmaceutical composition containing equine Neospora immunogen and a carrier.
ACTIVITY - Antiprotozoal.
MECHANISM OF ACTION - Induction of a specific immune response.
USE - Immunogens (optionally expressed from gene therapy vectors)

from equine Neospora are used in vaccines for treatment or prevention of Neospora infection in horses and other animals. Neospora is a causative agent of equine protozoal myeloencephalitis (EPM). Detection of Neospora-specific antigens, antibodies or nucleic acid (by usual immunoassay or hybridization tests) is used to diagnose infection. Antibodies (Ab) specific for equine Neospora are used for diagnosis; to select candidate immunogens for vaccine development; to isolate proteins; to screen DNA libraries and as therapeutic/prophylactic agents.

ADVANTAGE - Reagents specific for equine Neospora allow differentiation between equine protozoal myeloencephalitis caused by Neospora and **Sarcocystis neurona**. These pathogens require different treatments and treatment of Neospora is only effective if applied before the parasite has formed cysts. The vaccines also prevent shedding of oocysts by animals known to be infected.

Dwg.0/2

```
=> s l16 and antibod?
L23         343 L16 AND ANTIBOD?

=> s l23 and (treat? or therap?)
   4 FILES SEARCHED...
L24          50 L23 AND (TREAT? OR THERAP?)

=> dup rem l24
PROCESSING COMPLETED FOR L24
L25          23 DUP REM L24 (27 DUPLICATES REMOVED)

=> d bib ab 1-23

L25  ANSWER 1 OF 23  CAPLUS  COPYRIGHT 2003 ACS
AN   2002:946917  CAPLUS
DN   138:3686
TI   Monoclonal antibodies to Sarcocystis neurona
     and uses thereof
IN   Marsh, Antoinette
PA   USA
SO   U.S. Pat. Appl. Publ., 14 pp., which
     CODEN: USXXCO
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.         KIND  DATE          APPLICATION NO.   DATE
     ---------------    ----  --------      ---------------   --------
PI   US 2002187517       A1   20021212      US 2002-140754    20020507
PRAI US 2001-293603P     P    20010524
     US 2001-297810P     P    20010612
AB   The present invention is directed to particular monoclonal
     antibodies (2A7-18 and 2G5-2) that find use in the identification
     and purifn. of S. neurona and related antigens.  In particular, these
     antibodies permit the diagnosis of Sarcocystis related diseases
     such as equine protozoal myeloencephalitis (EPM).

L25  ANSWER 2 OF 23  CAPLUS  COPYRIGHT 2003 ACS
AN   2002:638328  CAPLUS
DN   137:151587
TI   Use of SAG-1 gene of Sarcocystis neurona for
     diagnostic tests and vaccines for equine protozoal myeloencephalitis
IN   Dame, John B.; Ellison, Siobhan P.; Yowell, Charles A.
PA   USA
SO   U.S. Pat. Appl. Publ., 21 pp.
     CODEN: USXXCO
DT   Patent
```

LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002115828	A1	20020822	US 2001-962993	20010924
PRAI	US 2000-234676P	P	20000922		

AB A gene encoding a 29 kilodalton protein found on the surface of merozoite stage S. neurona has been cloned and sequenced. The protein encoded by this gene, termed SnSAG-1, is an immunodominant antigen recognized on protein blots. Methods for using nucleic acids and polypeptides relating to SnSAG-1 in diagnostic tests and vaccine development are disclosed. Claimed sequences were not present at the time of publication.

L25 ANSWER 3 OF 23 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 1
AN 2003:112305 BIOSIS
DN PREV200300112305
TI Experimental induction of equine protozoan myeloencephalitis (EPM) in the horse: Effect of **Sarcocystis neurona** sporocyst inoculation dose on the development of clinical neurologic disease.
AU Sofaly, C. D. (1); Reed, S. M.; Gordon, J. C. (1); Dubey, J. P.; Oglesbee, M. J.; Njoku, C. J. (1); Grover, D. L. (1); Saville, W. J. A. (1)
CS (1) Department of Veterinary Preventive Medicine, College of Veterinary Medicine, The Ohio State University, Columbus, OH, 43210-1092, USA: saville.4@osu.edu USA
SO Journal of Parasitology, (December 2002, 2002) Vol. 88, No. 6, pp. 1164-1170. print.
ISSN: 0022-3395.
DT Article
LA English
AB The effect of inoculation dose of **Sarcocystis neurona** sporocysts on the development of clinical neurologic disease in horses was investigated. Twenty-four seronegative weanling horses were subjected to the natural stress of transport and then randomly assigned to 6 **treatment** groups of 4 horses each. Horses were then immediately inoculated with either 102, 103, 104, 105, or 106 S. neurona sporocysts or placebo using nasogastric tube and housed indoors. Weekly neurologic examinations were performed by a blinded observer. Blood was collected weekly for **antibody** determination by Western blot analysis. Cerebrospinal fluid was collected before inoculation and before euthanasia for S. neurona **antibody** determination. Horses were killed and necropsied between 4 and 5 wk after inoculation. Differences were detected among dose groups based on seroconversion times, severity of clinical neurologic signs, and presence of microscopic lesions. Seroconversion of challenged horses was observed as early as 14 days postinfection in the 106 sporocyst dose group. Mild to moderate clinical signs of neurologic disease were produced in challenged horses from all groups, with the most consistent signs seen in the 106 sporocyst dose group. Histologic lesions suggestive of S. neurona infection were detected in 4 of the 20 horses fed sporocysts. Parasites were not detected in equine tissues by light microscopy, immunohistochemistry, or bioassay in gamma-interferon gene knockout mice. Control horses remained seronegative for the duration of the study and had no histologic evidence of protozoal infection.

L25 ANSWER 4 OF 23 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 2
AN 2002:348434 BIOSIS
DN PREV200200348434
TI Reduced levels of nitric oxide metabolites in cerebrospinal fluid are associated with equine protozoal myeloencephalitis.
AU Njoku, Chinedu J.; Saville, William J. A.; Reed, Stephen M.; Oglesbee, Michael J.; Rajala-Schultz, Paivi J.; Stich, Roger W. (1)
CS (1) Department of Veterinary Preventive Medicine, The Ohio State

University, 1900 Coffey Rd., Columbus, OH, 43210-1092: stich.2@osu.edu USA
SO Clinical and Diagnostic Laboratory Immunology, (May, 2002) Vol. 9, No. 3, pp. 605-610. print.
ISSN: 1071-412X.
DT Article
LA English
AB Equine protozoal myeloencephalitis (EPM) is a disease of horses that is primarily associated with infection with the apicomplexan **Sarcocystis neurona**. Infection with this parasite alone is not sufficient to induce the disease, and the mechanism of neuropathogenesis associated with EPM has not been reported. Nitric oxide (NO) functions as a neurotransmitter, a vasodilator, and an immune effector and is produced in response to several parasitic protozoa. The purpose of this work was to determine if the concentration of NO metabolites (NOx-) in the cerebrospinal fluid (CSF) is correlated with the development of EPM. CSF NOx- levels were measured before and after transport-stressed, acclimated, or dexamethasone-**treated** horses (n = 3 per group) were experimentally infected with S. neurona sporocysts. CSF NOx- levels were also compared between horses that were diagnosed with EPM after natural infection with S. neurona and horses that did not have clinical signs of disease or that showed no evidence of infection with the parasite (n = 105). Among the experimentally infected animals, the mean CSF NOx- levels of the transport-stressed group, which had the most severe clinical signs, was reduced after infection, while these values were found to increase after infection in the remaining groups that had less severe signs of EPM. Under natural conditions, horses with EPM (n = 65) had a lower mean CSF NOx- concentration than clinically normal horses with **antibodies** (Abs) against S. neurona (n = 15) in CSF, and horses that developed ataxia (n = 81) had a significantly lower mean CSF NOx- concentration than horses that did not have neurologic signs (n = 24). In conclusion, lower CSF NOx- levels were associated with clinical EPM, suggesting that measurement of CSF NOx- levels could improve the accuracy of diagnostic tests that are based upon detection of S. neurona-specific Abs in CSF alone and that reduced NO levels could be causatively related to the development of EPM.

L25 ANSWER 5 OF 23 CABA COPYRIGHT 2003 CABI
AN 2002:114296 CABA
DN 20023070361
TI Folate deficiency during **treatment** with orally administered folic acid, sulphadiazine and pyrimethamine in a horse with suspected equine protozoal myeloencephalitis (EPM)
AU Piercy, R. J.; Hinchcliff, K. W.; Reed, S. M.
CS Department of Clinical Veterinary Science, The Ohio State University, 601 Vernon L. Tharp Street, Columbus, OH 43210, USA.
SO Equine Veterinary Journal, (2002) Vol. 34, No. 3, pp. 311-316. 35 ref.
ISSN: 0425-1644
DT Journal
LA English
AB A 6-year-old Quarter Horse show-mare with tail block suffering from dysphagia and ataxia believed to be the cause of equine protozoal myeloencephalitis (EPM) is presented at the Department of Clinical Veterinary Science, Ohio State University, Columbus Ohio, USA [date not given]. Sulfadiazine (14.7-44.4 mg/kg), pyrimethamine (0.7-2.2 mg/kg) and folic acid (9.6 mg, q. 12 h) was given to the animal for 9 months. Physical examination revealed ulceration and inflammation of the tongue, and a draining abscess and localized subcutaneous swelling at the dorsal aspect of the tail head. Haematology and serum biochemistry revealed anaemia and leukopenia, neutropenia, lymphopenia, low total CO2, hyperbilirubinaemia, and elevated creatinine and albumin. Previous medications were stopped and lactated Ringer's solution (120 ml/kg/day, i.v.), potassium penicillin (22 000 IU/kg, q 6 h, i.v.), gentamicin (Gentocin, 6.6 mg/kg, i.v.) and folic acid (0.11 mg/kg, i.v.) were

administered to the horse. Ater 6 days of **treatment**, cerebrospinal fluid and serum were submitted for **Sarcocystis neurona antibodies**. On day 8, there was complete healing of lingual ulcers and penicillin and gentamicin were discontinued while ceftiofur (Naxcel, 2.2 mg/kg q 12 h, i.m.) was administered. Four days later, the presence of S. neurona **antibodies** was confirmed, thus, supporting the diagnosis of EPM, and diclazuril (Clinacox, 5 mg/kg q 24 h, p.o.) was administered. After 68 days, the physical, oral and neurological examinations were declared all normal. It is concluded that folic acid supplementation does not prevent the development of folate deficiency and that it is not recommended to supplement folic acid to horses being **treated** with dihydrofolate reductase inhibitors.

L25 ANSWER 6 OF 23 WPIDS (C) 2003 THOMSON DERWENT
AN 2002-049244 [06] WPIDS
DNC C2002-013806
TI Vaccine useful for preventing or ameliorating equine protozoal myeloencephalitis disease, comprises inactivated **Sarcocystis neurona** cells and/or Neospora hughesi cells, antigens, DNA derived from the cells or their mixtures.
DC B04 C06 D16
IN BIGBIE, R B; NG, T K; WHALEN, J W
PA (AMHP) AMERICAN HOME PROD CORP; (AMHP) WYETH
CYC 96
PI WO 2001080885 A2 20011101 (200206)* EN 31p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2001051761 A 20011107 (200219)
US 2002041886 A1 20020411 (200227)
EP 1276499 A2 20030122 (200308) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
BR 2001010232 A 20030121 (200309)
ADT WO 2001080885 A2 WO 2001-US40527 20010413; AU 2001051761 A AU 2001-51761 20010413; US 2002041886 A1 Provisional US 2000-199435P 20000425, Provisional US 2001-278695P 20010326, US 2001-840485 20010423; EP 1276499 A2 EP 2001-925175 20010413, WO 2001-US40527 20010413; BR 2001010232 A BR 2001-10232 20010413, WO 2001-US40527 20010413
FDT AU 2001051761 A Based on WO 200180885; EP 1276499 A2 Based on WO 200180885; BR 2001010232 A Based on WO 200180885
PRAI US 2001-278695P 20010326; US 2000-199435P 20000425; US 2001-840485 20010423
AB WO 200180885 A UPAB: 20020128
NOVELTY - An immunogenically active component (I) comprising a merozoite **antibody** inducing, inactivated **Sarcocystis neurona** cells, tachyzoite **antibody** inducing, inactivated Neospora hughesi cells, a merozoite or tachyzoite **antibody** inducing antigen derived from the cells, DNA derived from the cells capable of inducing a merozoite or tachyzoite **antibody** immune response or their mixture, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a vaccine composition comprising (I), a pharmacologically acceptable carrier, and an immunogenicaly stimulating adjuvant;

(2) cell culture propagation (III) of S.neurona or N.hughesi protozoan parasite, comprising:

(i) growing a monolayer of cells having a confluency of 80-100%;

(ii) re-feeding the cells with supplemented growth media;

(iii) inoculating the cells with merozoites or tachyzoites;

(iv) holding the inoculated cells for 4-12 days; and

(v) decanting the supplemented growth media from the inoculated cells and refeeding the cells a second time with supplemented growth media; and

(3) preventing or ameliorating an EPM disease in equines, comprising administering an immunogenically active component selected from the following:

(i) merozoite **antibody** inducing, inactivated **Sarcocystis neurona** cells;

(ii) tachyzoite **antibody** inducing, inactivated Neospora hughesi cells;

(iii) a merozite or tachyzoite **antibody** inducing antigen derived from the cells;

(iv) DNA derived from the cells, capable of inducing a merezoite or tachyzoite **antibody** immune response; or

(v) a mixture of the above.

ACTIVITY - Neuroprotective; Antiinflammatory. No biological data was provided.

MECHANISM OF ACTION - Vaccine. One group of horses were administered 1 multiply 105 merozoites/dose of the vaccine, a second group of 21 horses were administered vaccine blended at 1 multiply 106 merozoites/dose, a third group of 10 horses were administered vaccine at 1 multiply 107 merozoites/dose, and a fourth of group of 10 horses were maintained as non-vaccinated environmental controls. **Treated** horses from all groups showed significant increases in **antibodies** to S.neurona merozoites while the control horses maintained a low to non-existent **antibody** level.

USE - (I) and (II) are useful for prevention or amelioration of equine protozoal myeloencephalitis (EPM) disease in equines. (III) is useful for the propagation of cells such as equine dermal, maiden darby bovine kidney, African green monkey kidney, canine monocyte, mouse monocyte, fetal rhesus monkey kidney, feline kidney, maiden darby canine kidney and baby hamster kidney cells (claimed).

Dwg:0/0

L25 ANSWER 7 OF 23 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
AN 2002-04497 BIOTECHDS
TI Vaccine useful for preventing or ameliorating equine protozoal myeloencephalitis disease, comprises inactivated Sarcocystis neuroma cells and/or Neospora hughesi cells, antigens, DNA derived from the cells or their mixtures;
horse protozoon myeloencephalitis disease **therapy** suing a recombinant vaccine or a nucleic acid vaccine
AU Bigbie R B; Ng T K; Whalen Jr J W
PA American-Home-Prod.
LO Madison, NJ, USA.
PI WO 2001080885 1 Nov 2001
AI WO 2001-US40527 13 Apr 2001
PRAI US 2001-278695 26 Mar 2001; US 2000-199435 25 Apr 2000
DT Patent
LA English
OS WPI: 2002-049244 [06]
AB An immunogenically active component (I) having a merozoite **antibody** inducing, inactivated **Sarcocystis neurona** cells, tachyzoite **antibody** inducing, inactivated Neospora hughesi cells, a merozoite or tachyzoite **antibody** inducing antigen derived from the cells, DNA derived from the cells capable of inducing a merozoite or tachyzoite **antibody** immune response or their mixture, is new. Also claimed are: a vaccine composition comprising (I), a pharmacologically acceptable carrier, and an immunogenically stimulating adjuvant; cell culture propagation (III) of S. neurona or N. hughesi protozoan parasite, involving growing a monolayer of cells, re-feeding with supplemented growth medium, inoculating with merozoites or tachyzoites, holding for

4-12 days and decanting the supplemented growth medium from the inoculated cells and refeeding a second time with supplemented growth medium; and preventing or ameliorating an EPM disease in horses. (III) is useful for the propagation of cells such as horse dermal, cattle kidney, African green monkey kidney, dog monocyte, mouse monocyte, fetal rhesus monkey kidney, feline kidney, dog kidney and baby hamster kidney cells. (31pp)

L25 ANSWER 8 OF 23 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 2001075088 EMBASE
TI Migration and development of **Sarcocystis neurona** in tissues of interferon gamma knockout mice fed sporocysts from a naturally infected opossum.
AU Dubey J.P.
CS J.P. Dubey, United States Dept. of Agriculture, Parasite Biol., Epidem./Syst. Lab., Animal and Natural Resources Inst, Beltsville, MD 20705-2350, United States. jdubey@anri.barc.usda.gov
SO Veterinary Parasitology, (26 Feb 2001) 95/2-4 (341-351).
Refs: 19
ISSN: 0304-4017 CODEN: VPARDI
PUI S 0304-4017(00)00401-5
CY Netherlands
DT Journal; Article
FS 004 Microbiology
005 General Pathology and Pathological Anatomy
LA English
SL English
AB Migration and development of **Sarcocystis neurona** was studied in 50 gamma interferon knockout mice fed graded doses of S. neurona sporocysts from the intestine of a naturally infected opossum. Mice were examined at necropsy 1-62 days after feeding sporocysts (DAFS). All tissue sections were reacted with anti-S. neurona-specific polyclonal rabbit serum in an immunohistochemical (IHC) test. Between 1 and 3 DAFS, organisms were seen mainly in intestines. Between 4 and 11 DAFS, organisms were seen in several visceral tissues. Beginning with 13 DAFS, schizonts and merozoites were present in sections of brains of all infected mice. All regions of the brain were parasitized but the hind brain was most severely affected. S. neurona was found in the spinal cord of all 10 mice examined 22-30 DAFS. Of the 28 infected mice examined 20-62 DAFS, S. neurona was found in the brains of all 28, lungs of 14, hearts of 8 and eyes of 3. More organisms were seen in IHC-stained sections than in sections stained with hematoxylin and eosin. **Treatment** of tissues with glutaraldehyde, Karnovsky fixative, and ethylene diamino tetra acetic acid (EDTA, used for decalcification) did not affect staining of organisms by IHC.

L25 ANSWER 9 OF 23 MEDLINE DUPLICATE 3
AN 2001511543 MEDLINE
DN 21442379 PubMed ID: 11558662
TI Suspected protozoal myeloencephalitis in a two-month-old colt.
AU Gray L C; Magdesian K G; Sturges B K; Madigan J E
CS Veterinary Medical Teaching Hospital, Large Animal Clinic, Department of Medicine and Epidemiology, School of Veterinary Medicine, University of California, Davis 95616, USA.
SO VETERINARY RECORD, (2001 Sep 1) 149 (9) 269-73.
Journal code: 0031164. ISSN: 0042-4900.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200201
ED Entered STN: 20010918
Last Updated on STN: 20020125

horse would have clinical improvement. The likelihood of survival among horses with EPM was lower among horses with more severe clinical signs and higher among horses that improved after EPM was diagnosed. Conclusions and Clinical Relevance: **Treatment** of horses with EPM is indicated in most situations; however, severity of clinical signs should be taken into consideration when making **treatment** decisions. Response to **treatment** is an important indicator of survival.

L25 ANSWER 14 OF 23 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 7
AN 2000:339710 BIOSIS
DN PREV200000339710
TI Detection of **Sarcocystis neurona** in the brain of a Grant's zebra (Equus burchelli bohmi.
AU Marsh, Antoinette E. (1); Denver, Mary; Hill, Frazer I.; McElhaney, M. R.; Trupkiewicz, J. G.; Stewart, James; Tell, Lisa
CS (1) Department of Veterinary Pathobiology, University of Missouri, Columbia, MO, 65211 USA
SO Journal of Zoo and Wildlife Medicine, (March, 2000) Vol. 31, No. 1, pp. 82-86. print.
ISSN: 1042-7260.
DT Article
LA English
SL English
AB An 8-yr-old intact male Grant's zebra (Equus burchelli bohmi) was referred to the Veterinary Medical Teaching Hospital of the University of California-Davis after being found in the owner's pasture obtunded and in lateral recumbency. The animal was hypothermic, weak, and unwilling to rise. There was no evidence of trauma, and the zebra had seemed normal the preceding evening. There was no extensor rigidity, and cranial nerve reflexes were normal. Flexor and extensor reflexes were weak upon initial examination. A complete blood count and serum biochemistry analysis revealed a mild leukocytosis, hyperfibrinogenemia, hypoglycemia, hyponatremia, hypochloremia, hypocalcemia, and hypoalbuminemia. Urinalysis was normal, and a urine toxicology screen for alkaloids was negative. No toxic substance was found in the hay or pasture grasses although the owner reported the presence of yellow star thistle and mushrooms in the pasture. The cerebrospinal fluid cytologic and biochemical analyses were normal, but **antibodies** to **Sarcocystis neurona** were detected. The zebra died despite aggressive supportive **therapy** over a 4-day period. The necropsy demonstrated severe gastrointestinal nematodiasis that could account for hypoalbuminemia and electrolyte abnormalities. Histopathologic examination of the nervous system revealed focal areas of perivascular cuffing in the brainstem that were comprised mainly of lymphocytes, monocytes, and plasma cells. Immunohistochemical staining identified the presence of S. neurona merozoites associated with the lesions. This zebra probably died from severe endoparasitism that resulted in malabsorption, weakness, and recumbency rather than from encephalitis associated with S. neurona merozoites. Equine protozoal myeloencephalitis has not been reported previously in nondomestic equids.

L25 ANSWER 15 OF 23 MEDLINE DUPLICATE 8
AN 2000152631 MEDLINE
DN 20152631 PubMed ID: 10690772
TI Improvement of western blot test specificity for detecting equine serum **antibodies** to **Sarcocystis neurona**.
AU Rossano M G; Mansfield L S; Kaneene J B; Murphy A J; Brown C M; Schott H C 2nd; Fox J C
CS Animal Health Diagnostic Laboratory, The Population Medicine Center, Michigan State University, East Lansing 48824, USA.
SO JOURNAL OF VETERINARY DIAGNOSTIC INVESTIGATION, (2000 Jan) 12 (1) 28-32. Journal code: 9011490. ISSN: 1040-6387.
CY United States

DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200003
ED Entered STN: 20000330
Last Updated on STN: 20000330
Entered Medline: 20000321
AB Equine protozoal myeloencephalitis (EPM) is a neurological disease of horses and ponies caused by the apicomplexan protozoan parasite **Sarcocystis neurona**. The purposes of this study were to develop the most stringent criteria possible for a positive test result, to estimate the sensitivity and specificity of the EPM Western blot **antibody** test, and to assess the ability of bovine **antibodies** to Sarcocystis cruzi to act as a blocking agent to minimize false-positive results in the western blot test for S. neurona. **Sarcocystis neurona** merozoites harvested from equine dermal cell culture were heat denatured, and the proteins were separated by sodium dodecyl sulfate-polyacrylamide gel electrophoresis in a 12-20% linear gradient gel. Separated proteins were electrophoretically transferred to polyvinylidene fluoride membranes and blocked in 1% bovine serum albumin and 0.5% Tween-Tris-buffered saline. Serum samples from 6 horses with S. neurona infections (confirmed by culture from neural tissue) and 57 horses without infections (horses from the Eastern Hemisphere, where S. neurona does not exist) were tested by Western blot. Horses from both groups had reactivity to the 62-, 30-, 16-, 13-, 11-, 10.5-, and 10-kD bands. Testing was repeated with another step. Blots were **treated** with bovine S. cruzi **antibodies** prior to loading the equine samples. After this modification of the Western blot test, positive infection status was significantly associated with reactivity to the 30- and 16-kD bands ($P<0.001$, Fisher's exact test). The S. cruzi **antibody**-blocked Western blot had a sample sensitivity of 100% and sample specificity of 98%. It is concluded that the specificity of the Western blot test is improved by blocking proteins not specific to S. neurona and using reactivity to the 30- and 16-kD bands as the criterion for a positive test.

L25 ANSWER 16 OF 23 WPIDS (C) 2003 THOMSON DERWENT
AN 1999-571872 [48] WPIDS
DNN N1999-421433 DNC C1999-166894
TI Biologically pure culture of equine Neospora, used as source of vaccines and diagnostic reagents.
DC B04 C06 C07 D16 S03
IN BARR, B C; CONRAD, P A; MARSH, A E
PA (REGC) UNIV CALIFORNIA
CYC 23
PI WO 9947927 A1 19990923 (199948)* EN 47p
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: AU CA JP
AU 9931874 A 19991011 (200008)
US 6071737 A 20000606 (200033)
EP 1064550 A1 20010103 (200102) EN
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
JP 2002509702 W 20020402 (200225) 47p
ADT WO 9947927 A1 WO 1999-US5754 19990316; AU 9931874 A AU 1999-31874 19990316; US 6071737 A US 1998-42600 19980316; EP 1064550 A1 EP 1999-913906 19990316, WO 1999-US5754 19990316; JP 2002509702 W WO 1999-US5754 19990316, JP 2000-537071 19990316
FDT AU 9931874 A Based on WO 9947927; EP 1064550 A1 Based on WO 9947927; JP 2002509702 W Based on WO 9947927
PRAI US 1998-42600 19980316
AB WO 9947927 A UPAB: 19991122
NOVELTY - Biologically pure culture of equine Neospora, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the

following:

(a) detecting **antibodies** (Ab) specifically reactive with equine Neospora antigens (Ag) by forming an Ab-Ag complex;

(b) detecting Neospora by forming a complex with an **antibody** (Ab1) specifically reactive with Neospora antigen;

(c) detecting Neospora-specific nucleic acid (I) by hybridization with a specific oligonucleotide probe; and

(d) pharmaceutical composition containing equine Neospora immunogen and a carrier.

ACTIVITY - Antiprotozoal.

MECHANISM OF ACTION - Induction of a specific immune response.

USE - Immunogens (optionally expressed from gene **therapy** vectors) from equine Neospora are used in vaccines for **treatment** or prevention of Neospora infection in horses and other animals. Neospora is a causative agent of equine protozoal myeloencephalitis (EPM). Detection of Neospora-specific antigens, **antibodies** or nucleic acid (by usual immunoassay or hybridization tests) is used to diagnose infection. **Antibodies** (Ab) specific for equine Neospora are used for diagnosis; to select candidate immunogens for vaccine development; to isolate proteins; to screen DNA libraries and as **therapeutic** /prophylactic agents.

ADVANTAGE - Reagents specific for equine Neospora allow differentiation between equine protozoal myeloencephalitis caused by Neospora and **Sarcocystis neurona**. These pathogens require different **treatments** and **treatment** of Neospora is only effective if applied before the parasite has formed cysts. The vaccines also prevent shedding of oocysts by animals known to be infected.

Dwg.0/2

L25 ANSWER 17 OF 23 MEDLINE

AN 2000080043 MEDLINE

DN 20080043 PubMed ID: 10613219

TI Encephalomyelitis associated with a **Sarcocystis neurona** -like organism in a sea otter.

CM Comment in: J Am Vet Med Assoc. 2000 Feb 1;216(3):329

AU Rosonke B J; Brown S R; Tornquist S J; Snyder S P; Garner M M; Blythe L L

CS Animal Medical Care of Newport, OR 97365, USA.

SO JOURNAL OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION, (1999 Dec 15) 215 (12) 1839-42, 1807.
Journal code: 7503067. ISSN: 0003-1488.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 200002

ED Entered STN: 20000229
Last Updated on STN: 20000525
Entered Medline: 20000215

AB An adult female sea otter housed for 5 years in an outdoor habitat in an aquarium developed signs of neurologic disease. Bilateral caudal paresis was evident initially and other neurologic signs consistent with CNS disease developed rapidly. Diagnostic work-up included CBC, serum biochemical analyses, determination of serum **antibody** titers, radiography of the vertebral column, CSF analysis, muscle biopsy, computed tomography of the brain, and assays for mercury, lead, and thiamine. A tentative diagnosis of encephalitis caused by a **Sarcocystis neurona**-like organism was made on the basis of detection of CSF **antibodies** by use of Western blot analysis. Response to **treatment** was not satisfactory and the sea otter was euthanatized. Immunohistochemical staining revealed S neurona-like organisms within foci of inflammation in the brain and spinal cord. This report provides evidence that, for sea otters, there may be a mode of transmission of an S neurona-like organism that does not involve opossums.

Equine protozoare Myeloenzephalitis bei einem importierten Paint-Horse
AU Weigand, K.; Grabner, A.
CS Chirurgische Tierklinik der LMU Munchen, Veterinarstr. 13, 80539 Munchen, Germany.
SO Pferdeheilkunde, (1997) Vol. 13, No. 3, pp. 231-234. 19 ref.
ISSN: 0177-7726
DT Journal
LA German
SL English
AB EPM is reported in a 7-year-old American Paint mare, 6 months after it was imported from Florida, USA, to Germany. The mare was referred to the veterinary clinic at Munich University in late pregnancy with severe neurological disorders characterized by ataxia, facial paresis, dullness and considerable problems with uptake of food and water. Mononuclear pleocytosis and elevated protein and lactate concentrations were detected in cerebrospinal fluid (CSF). Diagnosis of active EPM was confirmed by positive Western Blot reactivity on CSF and detection of **antibodies** to **Sarcocystis neurona**. The condition of the mare improved during 3 weeks of drug **therapy** by trimethoprim sulfonamide and palliative **treatment**. After parturition, the mare and the foal were discharged in good condition. **Treatment** with oral trimethoprim sulfonamide for a minimum of 90 days was continued to avoid relapse of EPM.

L25 ANSWER 22 OF 23 MEDLINE
AN 97260250 MEDLINE
DN 97260250 PubMed ID: 9106345
TI Equine protozoal myeloencephalitis.
AU MacKay R J
CS Department of Large Animal Clinical Sciences, University of Florida, College of Veterinary Medicine, Gainesville, USA.
SO VETERINARY CLINICS OF NORTH AMERICA. EQUINE PRACTICE, (1997 Apr) 13 (1) 79-96. Ref: 72
Journal code: 8511904. ISSN: 0749-0739.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199706
ED Entered STN: 19970612
Last Updated on STN: 19970612
Entered Medline: 19970603
AB Equine protozoal myeloencephalitis (EPM) is a common neurologic disease of horses in the Americas. Horses with EPM most commonly have abnormalities of gait, but they also may present with signs of brain disease. The disease ranges in severity from mild lameness to sudden recumbency, and clinical signs usually are progressive. A causative agent, **Sarcocystis neurona**, has been isolated from affected horses, and serologic surveys suggest that approximately 50% of horses in the United States have been exposed. EPM is considered a **treatable** disease, although the response to antimicrobial **treatment** often is incomplete. This article highlights new information about the life cycle of S. neurona and reviews the literature regarding diagnosis, clinical signs, and **treatment** of the disease.

L25 ANSWER 23 OF 23 MEDLINE DUPLICATE 11
AN 93385225 MEDLINE
DN 93385225 PubMed ID: 8373858
TI Immunohistochemical study to demonstrate **Sarcocystis neurona** in equine protozoal myeloencephalitis.

AU Hamir A N; Moser G; Galligan D T; Davis S W; Granstrom D E; Dubey J P
CS University of Pennsylvania School of Veterinary Medicine, New Bolton Center, Kennett Square 19348.
SO JOURNAL OF VETERINARY DIAGNOSTIC INVESTIGATION, (1993 Jul) 5 (3) 418-22.
Journal code: 9011490. ISSN: 1040-6387.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199310
ED Entered STN: 19931105
Last Updated on STN: 19931105
Entered Medline: 19931021
AB A 5-year (1985-1989) retrospective immunohistochemical study was conducted using an avidin-biotin complex (ABC) immunoperoxidase method to demonstrate **Sarcocystis neurona** in histologically suspect cases of equine protozoal myeloencephalitis (EPM). Primary **antibodies** against S. neurona and S. cruzi were utilized for the ABC technique. The findings were compared with those from cases in which the organisms were detected by examination of hematoxylin and eosin (HE)-stained neuronal sections. HE-stained sections detected the presence of the organisms in 20% of the suspect cases; whereas the ABC technique confirmed the presence of S. neurona in 51% and 67% of the cases by S. neurona and S. cruzi **antibodies**, respectively. A review of clinical case histories showed that 21/47 (45%) of the EPM horses with parasites in the tissue sections had prior **treatment** with antiprotozoal drugs and/or steroids. Using the test results of S. neurona and S. cruzi as a standard reference, HE test sensitivity based on examination of up to 30 neuronal sections per case was only 25%, and test specificity was 91%.

=> s l9 and sarcocystis neurona
L10 39 L9 AND SARCOCYSTIS NEURONA

=> s l10 and (16 kd or 30 kd)
L11 1 L10 AND (16 KD OR 30 KD)

=> d bib ab

L11 ANSWER 1 OF 1 MEDLINE
AN 2000152631 MEDLINE
DN 20152631 PubMed ID: 10690772
TI Improvement of western blot test specificity for detecting equine serum antibodies to **Sarcocystis neurona**.
AU **Rossano M G**; **Mansfield L S**; Kaneene J B; **Murphy A J**; Brown C M; Schott H C 2nd; Fox J C
CS Animal Health Diagnostic Laboratory, The Population Medicine Center, Michigan State University, East Lansing 48824, USA.
SO JOURNAL OF VETERINARY DIAGNOSTIC INVESTIGATION, (2000 Jan) 12 (1) 28-32. Journal code: 9011490. ISSN: 1040-6387.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200003
ED Entered STN: 20000330
Last Updated on STN: 20000330
Entered Medline: 20000321
AB Equine protozoal myeloencephalitis (EPM) is a neurological disease of horses and ponies caused by the apicomplexan protozoan parasite **Sarcocystis neurona**. The purposes of this study were to develop the most stringent criteria possible for a positive test result, to estimate the sensitivity and specificity of the EPM Western blot antibody test, and to assess the ability of bovine antibodies to Sarcocystis cruzi to act as a blocking agent to minimize false-positive results in the western blot test for S. neurona. **Sarcocystis neurona** merozoites harvested from equine dermal cell culture were heat denatured, and the proteins were separated by sodium dodecyl sulfate-polyacrylamide gel electrophoresis in a 12-20% linear gradient gel. Separated proteins were electrophoretically transferred to polyvinylidene fluoride membranes and blocked in 1% bovine serum albumin and 0.5% Tween-Tris-buffered saline. Serum samples from 6 horses with S. neurona infections (confirmed by culture from neural tissue) and 57 horses without infections (horses from the Eastern Hemisphere, where S. neurona does not exist) were tested by Western blot. Horses from both groups had reactivity to the 62-, 30-, 16-, 13-, 11-, 10.5-, and 10-kD bands. Testing was repeated with another step. Blots were treated with bovine S. cruzi antibodies prior to loading the equine samples. After this modification of the Western blot test, positive infection status was significantly associated with reactivity to the 30- and **16-kD** bands ($P<0.001$, Fisher's exact test). The S. cruzi antibody-blocked Western blot had a sample sensitivity of 100% and sample specificity of 98%. It is concluded that the specificity of the Western blot test is improved by blocking proteins not specific to S. neurona and using reactivity to the 30- and **16-kD** bands as the criterion for a positive test.

=> d his

(FILE 'HOME' ENTERED AT 14:49:07 ON 15 MAY 2003)

FILE 'BIOSIS, MEDLINE, AGRICOLA, EMBASE, CABA, WPIDS, JAPIO, BIOTECHDS, LIFESCI, CAPLUS' ENTERED AT 14:49:30 ON 15 MAY 2003

```
                E MANSFIELD LINDA S/AU
L1             30 S E2-E3
                E MANSFIELD L S/AU
L2            139 S E3
                E ROSSANO MARY G/AU
L3              9 S E3
                E ROSSANO M G/AU
L4             25 S E3
                E MURPHY ALICE J/AU
L5             15 S E2 OR E3
                E MURPHY A J/AU
L6            337 S E3
                E VRABLE RUTH A/AU
L7             11 S E2 OR E3
                E VRABLE R A/AU
L8             23 S E2 OR E3
L9            496 S L1-L8
L10            39 S L9 AND SARCOCYSTIS NEURONA
L11             1 S L10 AND (16 KD OR 30 KD)

=> s l9 and antibod?
L12           51 L9 AND ANTIBOD?

=> s l10 and antibod?
L13           26 L10 AND ANTIBOD?

=> dup rem l13
PROCESSING COMPLETED FOR L13
L14            12 DUP REM L13 (14 DUPLICATES REMOVED)

=> d bib ab 1-12

L14  ANSWER 1 OF 12  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE
     1
AN   2003:159207  BIOSIS
DN   PREV200300159207
TI   A herd-level analysis of risk factors for antibodies to
     Sarcocystis neurona in Michigan equids.
AU   Rossano, M. G.; Kaneene, J. B. (1); Marteniuk, J. V.; Banks, B.
     D.; Schott, H. C., II; Mansfield, L. S.
CS   (1) College of Veterinary Medicine, Population Medicine Center, A-109
     Veterinary Medical Center, Michigan State University, East Lansing, MI,
     48824-1314, USA: kaneene@cvm.msu.edu USA
SO   Preventive Veterinary Medicine, (15 February 2003) Vol. 57, No. 1-2, pp.
     7-13. print.
     ISSN: 0167-5877.
DT   Article
LA   English
AB   Equine protozoal myeloencephalitis (EPM) is a neurological disease of
     horses and ponies caused by infection of the central nervous system with
     the protozoan parasite Sarcocystis neurona. A
     herd-level analysis of a cross-sectional study of serum antibodies
     to S. neurona in Michigan equids was conducted, using data collected in
     1997 for study that included 1121 equids from 98 Michigan horse farms. Our
     objective was to identify specific herd-level risk factors associated with
     seropositivity. We tested associations between herd seroprevalence and
     various farm-management practices (including feed-storage methods and
     wildlife control). Multivariable models were developed for three strata
     based on relative opossum abundance (opossum districts). Herd
     seroprevalence ranged from 0 to 100% (median = 57%); No risk factor was
     significantly associated with herd seroprevalence at P ltoreq 0.05 in all
     opossum districts. Our results suggest that equids living in areas with
     large opossum populations might be infected with S. neurona from multiple
```

sources.

L14 ANSWER 2 OF 12 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2003:67219 BIOSIS
DN PREV200300067219
TI Immunoassay for equine protozoal myeloencephalitis in horses.
AU **Mansfield, Linda S.**; **Murphy, Alice J. (1)**; **Rossano, Mary G.**
CS (1) St. Johns, MI, USA USA
ASSIGNEE: Board of Trustees of Michigan State University
PI US 6489148 December 03, 2002
SO Official Gazette of the United States Patent and Trademark Office Patents, (Dec. 3 2002) Vol. 1265, No. 1, pp. No Pagination. http://www.uspto.gov/web/menu/patdata.html. e-file. ISSN: 0098-1133.
DT Patent
LA English
AB An immunoassay for Sarcocystis neurons **antibodies** in equines is described. The immunoassay uses blocking of Sarcocystis antigens by **antibodies** to Sarcocystis sp. other than **Sarcocystis neurona** in connection with the immunoassay.

L14 ANSWER 3 OF 12 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2002:234586 BIOSIS
DN PREV200200234586
TI Antigen test to detect equine protozoal myeloencephalitis in horse serum and cerebrospinal fluid.
AU **Mansfield, Linda S.**; **Rossano, Mary G.**; **Murphy, Alice J.**; **Vrable, Ruth A. (1)**
CS (1) Williamston, MI USA
ASSIGNEE: Board of Trustees of Michigan State University, East Lansing, MI, USA
PI US 6344337 February 05, 2002
SO Official Gazette of the United States Patent and Trademark Office Patents, (Feb. 5, 2002) Vol. 1255, No. 1, pp. No Pagination. http://www.uspto.gov/web/menu/patdata.html. e-file. ISSN: 0098-1133.
DT Patent
LA English
AB The present invention provides an immunoassay to detect identifying antigens in horses that are infected with **Sarcocystis neurona**. The immunoassay is preferably an antigen-capture-based assay that relies upon polyclonal or monoclonal **antibodies** against a 16 (+-4) and/or 30 (+-4) kDa antigens specific to **Sarcocystis neurona** to detect the presence of the 16 (+-4) and/or 30 (+-4) kDa antigens in equine serum or equine cerebrospinal fluid.

L14 ANSWER 4 OF 12 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 2
AN 2002:556058 BIOSIS
DN PREV200200556058
TI Cross-sectional study of serum **antibodies** against **Sarcocystis neurona** in cats tested for **antibodies** against Toxoplasma gondii.
AU **Rossano, Mary G.**; **Murphy, Alice J.**; **Vrable, Ruth A.**; Vanzo, Nicole E.; Lewis, Stacy K.; Sheline, Katherine D.; Kaneene, John B.; **Mansfield, Linda S. (1)**
CS (1) Animal Health Diagnostic Laboratory, College of Veterinary Medicine, Michigan State University, East Lansing, MI, 48824 USA
SO Journal of the American Veterinary Medical Association, (August 15, 2002) Vol. 221, No. 4, pp. 511-514. http://www.avma.org. print. ISSN: 0003-1488.

MECHANISM OF ACTION - Vaccine.
USE - The vaccines and methods are used for protecting equids against infections by the protozoan parasite Sarcocystis neurona.
Dwg.0/0

L14 ANSWER 6 OF 12 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
AN 2001-07735 BIOTECHDS
TI Vaccinating equids against protozoal **Sarcocystis neurona** infections using antigens;
Sarcocystis neurona nucleic acid vaccine and recombinant vaccine
AU **Mansfield L S**; **Rossano M G**; **Murphy A J**; **Vrable R A**
PA Univ.Michigan-State
LO East Lansing, MI, USA.
PI WO 2001015708 8 Mar 2001
AI WO 2000-US24221 31 Aug 2000
PRAI US 2000-513086 24 Feb 2000; US 1999-152193 2 Sep 1999
DT Patent
LA English
OS WPI: 2001-218486 [22]
AB A method for vaccinating equids against **Sarcocystis neurona** infection is claimed. It involves using protein groups of unique 16(+4) or 30(+4) antigens of S. neurona. Also claimed are: a vaccine (I) for providing passive immunity to **Sarcocystis neurona** infection; a vaccine (II) for active immunization of an equid against a S. neurona infection; a vaccine (III) for protecting an equid from S. neuronna infection; a method (IV or V) for vaccinating an equid against a S. neurona infection; a method (VI) of providing passive immunity to a S. neurona infection; a method (VII) for producing a protein (e.g. glutathione-transferase); a method (VIII) for producing an **antibody**; providing a microorganism in a culture containing DNA encoding a fusion protein; a monoclonal **antibody** (IX); an isolated DNA (X); a bacterial clone (XI); a vaccine (XII) for an equid containing an isolated recombinant protein; a vaccine (XIII or XIV) for an equid containing recombinant virus vector containing DNA; and a method (XV) for protecting an equid against S. neurona. The vaccines and methods are used for protecting equids against infection by the protozoon parasite Srcocystis neurona. (54pp)

L14 ANSWER 7 OF 12 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 4
AN 2001:135932 BIOSIS
DN PREV200100135932
TI The seroprevalence of **antibodies** to **Sarcocystis neurona** in Michigan equids.
AU **Rossano, M. G.**; Kaneene, J. B. (1); Marteniuk, J. V.; Banks, B. D.; Schott, H. C., II; **Mansfield, L. S.**
CS (1) Population Medicine Center, College of Veterinary Medicine, A-109 Veterinary Medical Center, Michigan State University, East Lansing, MI, 48824-1314: kaneene@cvm.msu.edu USA
SO Preventive Veterinary Medicine, (29 January, 2001) Vol. 48, No. 2, pp. 113-128. print.
ISSN: 0167-5877.
DT Article
LA English
SL English
AB A cross-sectional study of serum **antibodies** to **Sarcocystis neurona** (the etiologic agent of equine protozoal myeloencephalitis, EPM) was performed on Michigan equids. Our objectives were to determine the seroprevalence of **antibodies** to S. neurona in Michigan equids and to identify specific risk factors for seropositivity. A random, weighted sample of Michigan horse farms

conjugate and then detected by reaction with an appropriate color forming substrate. The **antibody** is immobilized on a support chosen from a membrane or a plate. (64pp)

L14 ANSWER 12 OF 12 MEDLINE DUPLICATE 7
AN 2000152631 MEDLINE
DN 20152631 PubMed ID: 10690772
TI Improvement of western blot test specificity for detecting equine serum **antibodies** to **Sarcocystis neurona**.
AU **Rossano M G**; **Mansfield L S**; Kaneene J B; **Murphy A J**; Brown C M; Schott H C 2nd; Fox J C
CS Animal Health Diagnostic Laboratory, The Population Medicine Center, Michigan State University, East Lansing 48824, USA.
SO JOURNAL OF VETERINARY DIAGNOSTIC INVESTIGATION, (2000 Jan) 12 (1) 28-32. Journal code: 9011490. ISSN: 1040-6387.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200003
ED Entered STN: 20000330
Last Updated on STN: 20000330
Entered Medline: 20000321
AB Equine protozoal myeloencephalitis (EPM) is a neurological disease of horses and ponies caused by the apicomplexan protozoan parasite **Sarcocystis neurona**. The purposes of this study were to develop the most stringent criteria possible for a positive test result, to estimate the sensitivity and specificity of the EPM Western blot **antibody** test, and to assess the ability of bovine **antibodies** to Sarcocystis cruzi to act as a blocking agent to minimize false-positive results in the western blot test for S. neurona. **Sarcocystis neurona** merozoites harvested from equine dermal cell culture were heat denatured, and the proteins were separated by sodium dodecyl sulfate-polyacrylamide gel electrophoresis in a 12-20% linear gradient gel. Separated proteins were electrophoretically transferred to polyvinylidene fluoride membranes and blocked in 1% bovine serum albumin and 0.5% Tween-Tris-buffered saline. Serum samples from 6 horses with S. neurona infections (confirmed by culture from neural tissue) and 57 horses without infections (horses from the Eastern Hemisphere, where S. neurona does not exist) were tested by Western blot. Horses from both groups had reactivity to the 62-, 30-, 16-, 13-, 11-, 10.5-, and 10-kD bands. Testing was repeated with another step. Blots were treated with bovine S. cruzi **antibodies** prior to loading the equine samples. After this modification of the Western blot test, positive infection status was significantly associated with reactivity to the 30- and 16-kD bands ($P<0.001$, Fisher's exact test). The S. cruzi **antibody**-blocked Western blot had a sample sensitivity of 100% and sample specificity of 98%. It is concluded that the specificity of the Western blot test is improved by blocking proteins not specific to S. neurona and using reactivity to the 30- and 16-kD bands as the criterion for a positive test.

=> d his

(FILE 'HOME' ENTERED AT 14:49:07 ON 15 MAY 2003)

FILE 'BIOSIS, MEDLINE, AGRICOLA, EMBASE, CABA, WPIDS, JAPIO, BIOTECHDS, LIFESCI, CAPLUS' ENTERED AT 14:49:30 ON 15 MAY 2003
E MANSFIELD LINDA S/AU
L1 30 S E2-E3
E MANSFIELD L S/AU
L2 139 S E3

Rossano, Mary G.

CS (1) St. Johns, MI, USA USA
ASSIGNEE: Board of Trustees of Michigan State University

PI US 6489148 December 03, 2002

SO Official Gazette of the United States Patent and Trademark Office Patents, (Dec. 3 2002) Vol. 1265, No. 1, pp. No Pagination. http://www.uspto.gov/web/menu/patdata.html. e-file. ISSN: 0098-1133.

DT Patent

LA English

AB An immunoassay for Sarcocystis neurons antibodies in equines is described. The immunoassay uses blocking of Sarcocystis antigens by antibodies to Sarcocystis sp. other than **Sarcocystis neurona** in connection with the immunoassay.

L15 ANSWER 3 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

AN 2002:234586 BIOSIS

DN PREV200200234586

TI Antigen test to detect equine protozoal myeloencephalitis in horse serum and cerebrospinal fluid.

AU **Mansfield, Linda S.; Rossano, Mary G.; Murphy, Alice J.; Vrable, Ruth A. (1)**

CS (1) Williamston, MI USA
ASSIGNEE: Board of Trustees of Michigan State University, East Lansing, MI, USA

PI US 6344337 February 05, 2002

SO Official Gazette of the United States Patent and Trademark Office Patents, (Feb. 5, 2002) Vol. 1255, No. 1, pp. No Pagination. http://www.uspto.gov/web/menu/patdata.html. e-file. ISSN: 0098-1133.

DT Patent

LA English

AB The present invention provides an immunoassay to detect identifying antigens in horses that are infected with **Sarcocystis neurona**. The immunoassay is preferably an antigen-capture-based assay that relies upon polyclonal or monoclonal antibodies against a 16 (+-4) and/or 30 (+-4) kDa antigens specific to **Sarcocystis neurona** to detect the presence of the 16 (+-4) and/or 30 (+-4) kDa antigens in equine serum or equine cerebrospinal fluid.

L15 ANSWER 4 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 2

AN 2002:556058 BIOSIS

DN PREV200200556058

TI Cross-sectional study of serum antibodies against **Sarcocystis neurona** in cats tested for antibodies against Toxoplasma gondii.

AU **Rossano, Mary G.; Murphy, Alice J.; Vrable, Ruth A.**; Vanzo, Nicole E.; Lewis, Stacy K.; Sheline, Katherine D.; Kaneene, John B.; **Mansfield, Linda S. (1)**

CS (1) Animal Health Diagnostic Laboratory, College of Veterinary Medicine, Michigan State University, East Lansing, MI, 48824 USA

SO Journal of the American Veterinary Medical Association, (August 15, 2002) Vol. 221, No. 4, pp. 511-514. http://www.avma.org. print. ISSN: 0003-1488.

DT Article

LA English

AB Objective-To determine apparent seroprevalence of antibodies against **Sarcocystis neurona** in a population of domestic cats previously tested for antibodies against Toxoplasma gondii. Design-Cross-sectional study. Sample Population-Serum from 196 domestic cats. Procedure-Banked serum samples submitted to the Michigan State University Animal Health Diagnostic Laboratory for T gondii diagnostic testing were tested for antibodies against S neurona by use of an indirect

reacted with peroxidase conjugate and then detected by reaction with an appropriate color forming substrate. The antibody is immobilized on a support chosen from a membrane or a plate. (64pp)

L15 ANSWER 14 OF 15 MEDLINE DUPLICATE 8
AN 2000152631 MEDLINE
DN 20152631 PubMed ID: 10690772
TI Improvement of western blot test specificity for detecting equine serum antibodies to **Sarcocystis neurona**.
AU **Rossano M G**; **Mansfield L S**; Kaneene J B; **Murphy A J**; Brown C M; Schott H C 2nd; Fox J C
CS Animal Health Diagnostic Laboratory, The Population Medicine Center, Michigan State University, East Lansing 48824, USA.
SO JOURNAL OF VETERINARY DIAGNOSTIC INVESTIGATION, (2000 Jan) 12 (1) 28-32. Journal code: 9011490. ISSN: 1040-6387.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200003
ED Entered STN: 20000330
Last Updated on STN: 20000330
Entered Medline: 20000321
AB Equine protozoal myeloencephalitis (EPM) is a neurological disease of horses and ponies caused by the apicomplexan protozoan parasite **Sarcocystis neurona**. The purposes of this study were to develop the most stringent criteria possible for a positive test result, to estimate the sensitivity and specificity of the EPM Western blot antibody test, and to assess the ability of bovine antibodies to Sarcocystis cruzi to act as a blocking agent to minimize false-positive results in the western blot test for S. neurona. **Sarcocystis neurona** merozoites harvested from equine dermal cell culture were heat denatured, and the proteins were separated by sodium dodecyl sulfate-polyacrylamide gel electrophoresis in a 12-20% linear gradient gel. Separated proteins were electrophoretically transferred to polyvinylidene fluoride membranes and blocked in 1% bovine serum albumin and 0.5% Tween-Tris-buffered saline. Serum samples from 6 horses with S. neurona infections (confirmed by culture from neural tissue) and 57 horses without infections (horses from the Eastern Hemisphere, where S. neurona does not exist) were tested by Western blot. Horses from both groups had reactivity to the 62-, 30-, 16-, 13-, 11-, 10.5-, and 10-kD bands. Testing was repeated with another step. Blots were treated with bovine S. cruzi antibodies prior to loading the equine samples. After this modification of the Western blot test, positive infection status was significantly associated with reactivity to the 30- and 16-kD bands ($P<0.001$, Fisher's exact test). The S. cruzi antibody-blocked Western blot had a sample sensitivity of 100% and sample specificity of 98%. It is concluded that the specificity of the Western blot test is improved by blocking proteins not specific to S. neurona and using reactivity to the 30- and 16-kD bands as the criterion for a positive test.

L15 ANSWER 15 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 9
AN 2000:21537 BIOSIS
DN PREV200000021537
TI Simplified technique for isolation, excystation, and culture of Sarcocystis species from opossums.
AU **Murphy, A. J. (1)**; **Mansfield, L. S.**
CS (1) Animal Health Diagnostic Laboratory, Michigan State University, East Lansing, MI, 48824 USA
SO Journal of Parasitology, (Oct., 1999) Vol. 85, No. 5, pp. 979-981. ISSN: 0022-3395.
DT Article

and analyzed both qualitatively (western blot) and quantitatively (anti-17kDa) for anti-S. neurona IgG. Four of the challenged horses were given dexamethasone (0.1mg/kg orally once daily) for the duration of the experiment. All challenged horses immunoconverted against S. neurona in blood within 32 days of challenge and in CSF within 61 days. There was a trend (P = 0.057) for horses given dexamethasone to immunoconvert earlier than horses that were not immunosuppressed. Anti-17kDa was detected in the CSF of all challenged horses by day 61. This response was statistically greater at day 32 in horses given dexamethasone. Control horses remained seronegative throughout the period in which all challenged horses converted. One control horse immunoconverted in blood at day 75 and in CSF at day 89. Signs of neurologic disease were mild to equivocal in challenged horses. Horses given dexamethasone had more severe signs of limb weakness than did horses not given dexamethasone; however, we could not determine whether these signs were due to spinal cord disease or to effects of systemic illness. At necropsy, mild-moderate multifocal gliosis and neurophagia were found histologically in the spinal cords of 7/8 challenged horses. No organisms were seen either in routinely processed sections or by immunohistochemistry. Although neurologic disease comparable to naturally occurring equine protozoal myeloencephalitis (EPM) was not produced, we had clear evidence of an immune response to challenge both systemically and in the CNS. Broad immunosuppression with dexamethasone did not increase the severity of histologic changes in the CNS of challenged horses. Future work must focus on defining the factors that govern progression of inapparent S. neurona infection to EPM.

L20 ANSWER 3 OF 3 MEDLINE
AN 93222344 MEDLINE
DN 93222344 PubMed ID: 8466988
TI Equine protozoal myeloencephalitis: antigen analysis of cultured **Sarcocystis neurona** merozoites.
AU Granstrom D E; Dubey J P; Davis S W; Fayer R; Fox J C; Poonacha K B; Giles R C; Comer P F
CS Department of Veterinary Science, University of Kentucky, Lexington 40546-0099.
SO JOURNAL OF VETERINARY DIAGNOSTIC INVESTIGATION, (1993 Jan) 5 (1) 88-90. Journal code: 9011490. ISSN: 1040-6387.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199305
ED Entered STN: 19930521
Last Updated on STN: 19930521
Entered Medline: 19930510
AB Antigens of cultured **Sarcocystis neurona** merozoites were examined using immunoblot analysis. Blotted proteins were probed with S. cruzi, S. muris, and S. neurona antisera produced in rabbits, S. fayeri (pre- and post-infection) and S. neurona (pre- and post-inoculation) sera produced in horses, immune sera from 7 histologically confirmed cases of equine protozoal myeloencephalitis (EPM), and pre-suckle serum from a newborn foal. Eight proteins, 70, 24, 23.5, 22.5, 13, 11, 10.5, and 10 Kd, were detected only by S. neurona antiserum and/or immune serum from EPM-affected horses. Equine sera were titered by the indirect immunofluorescent **antibody** (IFA) method using air-dried, cultured S. neurona merozoites. Anti-Sarcocystis IFA titers were found in horses with or without EPM. Serum titers did not correspond to the number of specific bands recognized on immunoblots.

=> s l19 and kd
L21 1 L19 AND KD

Entered Medline: 20020117

AB A two-month-old Appaloosa colt developed neurological signs shortly after birth involving deficits affecting cranial nerves IV, VII, VIII, IX, X and XII, and possibly nerve VI. The most likely differential diagnoses were congenital anomalies, meningoencephalitides, trauma or nutritional causes. The foal was investigated by the analysis of cerebrospinal fluid (CSF), electromyelography (EMG), brain auditory evoked responses, magnetic resonance imaging (MRI), peripheral nerve biopsy, and Western blot analysis for the presence of intrathecal **antibodies** to **Sarcocystis neurona**, the causative agent of equine protozoal myeloencephalitis. Significantly abnormal EMG findings included spontaneous electrical activity of the tongue, suggesting denervation. The MRI was useful in ruling out masses, congenital anomalies and focal abscessation. The cytology of CSF revealed mild mononuclear reactivity. Western blot testing of CSF was positive, indicating the intrathecal presence of **antibodies** to S neurona. The foal was **treated** with pyrimethamine and trimethoprim-sulphadiazine for two months and returned to nearly normal neurologic status.

L25 ANSWER 10 OF 23 CABA COPYRIGHT 2003 CABI

AN 2001:140175 CABA

DN 20013139273

TI Efficacy of ponazuril 15% oral paste as a **treatment** for equine protozoal myeloencephalitis

AU Furr, M.; Kennedy, T.; MacKay, R.; Reed, S.; Andrews, F.; Bernard, B.; Bain, F.; Byars, D.

CS Virginia-Maryland Regional College of Veterinary Medicine, Marion duPont Scott Equine Medical Center, PO Box 1938, Leesburg, VA 20177, USA.

SO Veterinary Therapeutics, (2001) Vol. 2, No. 3, pp. 215-222. 15 ref. ISSN: 1528-3593

DT Journal

LA English

AB Equine protozoal myeloencephalitis (EPM) is a neurologic disease of horses most commonly caused by the protozoan parasite **Sarcocystis neurona**. Until recently the only **treatment** option was the combination of a sulfonamide with pyrimethamine. The present study was performed to assess the efficacy of ponazuril, an anticoccidial triazine-based compound, as a **treatment** for naturally occurring EPM. 101 horses with EPM were randomly allocated to **treatment** with ponazuril 15% oral paste at either 5 or 10 mg/kg body weight for 28 consecutive days. Horses were evaluated clinically and by analysis of blood and cerebrospinal fluid (CSF) before and 28 and 118 days after the start of **treatment**. Clinical success was defined as either an improvement in neurologic score by at least one grade (on a 0 to 5 scale) or conversion to negative status on Western blot for S. neurona **antibodies** by 20 days following cessation of **treatment**. Overall, 62% of the bones, including 28 of 47 **treated** with ponazuril at 5 mg/kg and 35 of 54 **treated** with 10 mg/kg, met the criteria for successful **treatment**. The Western blot for CSF became negative in 10% (10/101) of the horses. Quantification of the anti-17kDa **antibody** response in Western blot (relative quantity CSF) did not reveal a significant change in response to **treatment**. However, immunoglobulin index did decrease significantly during **treatment** (P=.01). The findings of this study support the efficacy of ponazuril for the **treatment** of EPM.

L25 ANSWER 11 OF 23 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 4

AN 2001:169888 BIOSIS

DN PREV200100169888

TI Utilization of stress in the development of an equine model for equine protozoal myeloencephalitis.

AU Saville, W. J. A. (1); Stich, R. W.; Reed, S. M.; Njoku, C. J.; Oglesbee,

M. J.; Wunschmann, A.; Grover, D. L.; Larew-Naugle, A. L.; Stanek, J. F.; Granstrom, D. E.; Dubey, J. P.

CS (1) Department of Veterinary Preventive Medicine, College of Veterinary Medicine, Ohio State University, Columbus, OH, 43210: saville.4@osu.edu USA

SO Veterinary Parasitology, (26 February, 2001) Vol. 95, No. 2-4, pp. 211-222. print.
ISSN: 0304-4017.

DT Article

LA English

SL English

AB Neurologic disease in horses caused by **Sarcocystis neurona** is difficult to diagnose, **treat**, or prevent, due to the lack of knowledge about the pathogenesis of the disease. This in turn is confounded by the lack of a reliable equine model of equine protozoal myeloencephalitis (EPM). Epidemiologic studies have implicated stress as a risk factor for this disease, thus, the role of transport stress was evaluated for incorporation into an equine model for EPM. Sporocysts from feral opossums were bioassayed in interferon-gamma gene knockout (KO) mice to determine minimum number of viable S. neurona sporocysts in the inoculum. A minimum of 80,000 viable S. neurona sporocysts were fed to each of the nine horses. A total of 12 S. neurona **antibody** negative horses were divided into four groups (1-4). Three horses (group 1) were fed sporocysts on the day of arrival at the study site, three horses were fed sporocysts 14 days after acclimatization (group 2), three horses were given sporocysts and dexamethasone 14 days after acclimatization (group 3) and three horses were controls (group 4). All horses fed sporocysts in the study developed **antibodies** to S. neurona in serum and cerebrospinal fluid (CSF) and developed clinical signs of neurologic disease. The most severe clinical signs were in horses in group 1 subjected to transport stress. The least severe neurologic signs were in horses **treated** with dexamethasone (group 3). Clinical signs improved in four horses from two **treatment** groups by the time of euthanasia (group 1, day 44; group 3, day 47). Post-mortem examinations, and tissues that were collected for light microscopy, immunohistochemistry, tissue cultures, and bioassay in KO mice, revealed no direct evidence of S. neurona infection. However, there were lesions compatible with S. neurona infection in horses. The results of this investigation suggest that stress can play a role in the pathogenesis of EPM. There is also evidence to suggest that horses in nature may clear the organism routinely, which may explain the relatively high number of normal horses with CSF **antibodies** to S. neurona compared to the prevalence of EPM.

L25 ANSWER 12 OF 23 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 5

AN 2001:169887 BIOSIS

DN PREV200100169887

TI Immunoconversion against **Sarcocystis neurona** in normal and dexamethasone-**treated** horses challenged with S. neurona sporocysts.

AU Cutler, Tim J.; MacKay, Robert J. (1); Ginn, Pamela E.; Gillis, Karen; Tanhauser, Susan M.; LeRay, Erin V.; Dame, John B.; Greiner, Ellis C.

CS (1) Large Animal Clinical Sciences, College of Veterinary Medicine, University of Florida, Gainesville, FL, 32610: mackayr@mail.vetmed.ufl.edu USA

SO Veterinary Parasitology, (26 February, 2001) Vol. 95, No. 2-4, pp. 197-210. print.
ISSN: 0304-4017.

DT Article

LA English

SL English

AB Equine protozoal myeloencephalitis is a common neurologic disease of

horses in the Americas usually caused by **Sarcocystis neurona**. To date, the disease has not been induced in horses using characterized sporocysts from Didelphis virginiana, the definitive host. S. neurona sporocysts from 15 naturally infected opossums were fed to horses seronegative for **antibodies** against S. neurona. Eight horses were given 5 X 105 sporocysts daily for 7 days. Horses were examined for abnormal clinical signs, and blood and cerebrospinal fluid were harvested at intervals for 90 days after the first day of challenge and analyzed both qualitatively (western blot) and quantitatively (anti-17 kDa) for anti-S. neurona IgG. Four of the challenged horses were given dexamethasone (0.1 mg/kg orally once daily) for the duration of the experiment. All challenged horses immunoconverted against S. neurona in blood within 32 days of challenge and in CSF within 61 days. There was a trend (P = 0.057) for horses given dexamethasone to immunoconvert earlier than horses that were not immunosuppressed. Anti-17 kDa was detected in the CSF of all challenged horses by day 61. This response was statistically greater at day 32 in horses given dexamethasone. Control horses remained seronegative throughout the period in which all challenged horses converted. One control horse immunoconverted in blood at day 75 and in CSF at day 89. Signs of neurologic disease were mild to equivocal in challenged horses. Horses given dexamethasone had more severe signs of limb weakness than did horses not given dexamethasone; however, we could not determine whether these signs were due to spinal cord disease or to effects of systemic illness. At necropsy, mild-moderate multifocal gliosis and neurophagia were found histologically in the spinal cords of 7/8 challenged horses. No organisms were seen either in routinely processed sections or by immunohistochemistry. Although neurologic disease comparable to naturally occurring equine protozoal myeloencephalitis (EPM) was not produced, we had clear evidence of an immune response to challenge both systemically and in the CNS. Broad immunosuppression with dexamethasone did not increase the severity of histologic changes in the CNS of challenged horses. Future work must focus on defining the factors that govern progression of inapparent S. neurona infection to EPM.

L25 ANSWER 13 OF 23 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 6

AN 2000:509421 BIOSIS

DN PREV200000509421

TI Evaluation of risk factors associated with clinical improvement and survival of horses with equine protozoal myeloencephalitis.

AU Saville, William J. (1); Morley, Paul S. (1); Reed, Stephen M.; Granstrom, David E.; Kohn, Catherine W.; Hinchcliff, Kenneth W.; Wittum, Thomas E. (1)

CS (1) Department of Veterinary Preventive Medicine, College of Veterinary Medicine, Ohio State University, Columbus, OH, 43210 USA

SO Journal of the American Veterinary Medical Association, (October 15, 2000) Vol. 217, No. 8, pp. 1181-1185. print.
ISSN: 0003-1488.

DT Article

LA English

SL English

AB Objective: To investigate risk factors for use in predicting clinical improvement and survival of horses with equine protozoal myeloencephalitis (EPM). Design: Longitudinal epidemiologic study. Animals: 251 horses with EPM. Procedure: Between 1992 and 1995, 251 horses with EPM were admitted to our facility. A diagnosis of EPM was made on the basis of neurologic abnormalities and detection of **antibody** to **Sarcocystis neurona** or S neurona DNA in CSF. Data were obtained from hospital records and through telephone follow-up interviews. Factors associated with clinical improvement and survival were analyzed, using multivariable logistic regression. Results: The likelihood of clinical improvement after diagnosis of EPM was lower in horses used for breeding and pleasure activities. **Treatment** for EPM increased the probability that a

L25 ANSWER 18 OF 23 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 9
AN 1999:283751 BIOSIS
DN PREV199900283751
TI Initial experiences with the use of nitazoxanide in the **treatment** of equine protozoal encephalitis in Northern California.
AU Vatistas, Nicholas (1); Fenger, Clara; Palma, Kathleen; Sifferman, Roger
CS (1) VM Surgical and Radiological Sciences, University of California, Tupper Hall, Room 2112, Davis, CA, 95688 USA
SO Equine Practice, (May, 1999) Vol. 21, No. 5, pp. 18-21. ISSN: 0162-8941.
DT Article
LA English
SL English
AB Equine protozoal myeloencephalitis (EPM) is the most common neurological condition affecting horses in North and South America. Nitazoxanide has been reported to be effective against a wide variety of parasites and bacteria in both animals and humans, including protozoa, nematodes, cestodes, trematodes, almost all anaerobic obligate and facultative bacteria, and some aerobic bacteria. The purpose of this study was to determine the effectiveness of nitazoxanide for the **treatment** of EPM in horses. For inclusion in the study, horses had to have evidence of proprioceptive deficits in one or more limbs, and have a positive immunoblot (Western blot) assay for **Sarcocystis neurona antibodies** in cerebrospinal fluid. The degree of ataxia was graded from 0 (none) to 5 (severe). Seven horses fit the criteria for inclusion, five horses were grade 2, one horse was a grade 3, and one horse was a grade 4. Nitazoxanide was administered as a feed additive, as tablets, as a powder, or as a paste at 50 or75 mg/kg for approximately 28 days. Two horses became inappetent and depressed during the course of **treatment**. However, no long-term sequelae were noted. Four horses became pregnant while on the medication, and remained pregnant at the end of the study period. Neurologic signs returned in two horses, and medication was re-introduced. By the end of the trial (85 to 140 days), five horses were neurologically normal, one horse had improved from a grade 4 to a grade 1, and one horse was unchanged. Cerebrospinal fluid samples were obtained from approximately 85 to 140 days after the start of medication. The samples remained positive for **Sarcocystis neurona antibodies** by immunoblot (Western blot). However, in six of the seven horses, the relative quantity of **antibody** had decreased. In its final formulation as a paste, nitazoxanide was well accepted and well tolerated by horses. It improved the neurological status of six of the seven horses. Nitazoxanide has the advantage over presently available medications in that it is cidal (in other species) rather than static in action, it has been administered to pregnant rodents without inducing signs of fetal abnormalities, and is available in a formulation that is more easily administered to horses.

L25 ANSWER 19 OF 23 MEDLINE
AN 1999048790 MEDLINE
DN 99048790 PubMed ID: 9831950
TI Neospora caninum-associated equine protozoal myeloencephalitis.
AU Hamir A N; Tornquist S J; Gerros T C; Topper M J; Dubey J P
CS College of Veterinary Medicine, Oregon State University, Corvallis 97331, USA.
SO VETERINARY PARASITOLOGY, (1998 Nov 27) 79 (4) 269-74. Journal code: 7602745. ISSN: 0304-4017.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199901

ED Entered STN: 19990202
Last Updated on STN: 19990202
Entered Medline: 19990119

AB Equine protozoal myeloencephalitis (EPM) was clinically diagnosed in a 20-year-old horse with severe ataxia. The cerebrospinal fluid was positive for **Sarcocystis neurona antibodies** by western blot. The horse was administered corticosteroids to facilitate in vitro culture of S. neurona from its spinal cord following necropsy. Microscopic lesions of EPM were present in the brain and in the spinal cord, including multifocal inflammatory cellular infiltrates and several large groups of protozoa. Immunohistochemical, and light and electron microscopic examinations revealed that the protozoa were Neospora caninum and not S. neurona. The protozoa divided by endodyogeny, tachyzoites had rhoptries, and organisms reacted specifically to N. caninum **antibodies**. Veterinarians should be aware of increasing diagnosis of N. caninum as another etiological agent responsible for the lesions of EPM.

L25 ANSWER 20 OF 23 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 10

AN 1997:215661 BIOSIS

DN PREV199799522165

TI Epizootic of equine protozoal myeloencephalitis on a farm.

AU Fenger, Clara K. (1); Granstrom, David E.; Langemeier, John L.; Stamper, Shelby

CS (1) Equine Intern. Med. Consulting, 3288 Valhalla Dr., Lexington, KY 40515 USA

SO Journal of the American Veterinary Medical Association, (1997) Vol. 210, No. 7, pp. 923-927.
ISSN: 0003-1488.

DT Article

LA English

AB Objective-To determine the clinical findings, course of **treatment**, and long-term outcome of horses on a farm in central Kentucky during an epizootic of equine protozoal myeloencephalitis (EPM). Design-Cohort study. Animals-21 horses on a farm in central Kentucky, 12 of which developed clinical signs of EPM. Procedure-Horses on the farm were serially examined for signs of neurologic disease and serum and CSF **antibodies** to **Sarcocystis neurona**. Horses were considered to have EPM if they had neurologic signs and positive test results for **antibodies** to S neurona in CSF. Blood values were monitored for evidence of abnormalities resulting from long-term pyrimethamine and trimethoprim-sulfamethoxazole administration. Physical, neurologic, and fetal necropsy examinations were performed as needed. Horses were **treated** for EPM until they had negative test results for CSF **antibodies** to S neurona. Results-Of 21 horses on the farm, 12 had EPM over the course of 6 months. The duration of **treatment** ranged from 45 to 211 days, excluding 1 horse that persistently had CSF **antibodies** to S neurona. Adverse effects from pyrimethamine and trimethoprim-sulfamethoxazole administration included transient fever, anorexia, and depression (n = 2); acute worsening of ataxia (2); mild anemia (4); and abortions (3). Clinical Implications-EPM may develop as an epizootic. In the horses of this report, subtle clinical signs that were originally considered unimportant ultimately progressed to obvious neurologic signs. Adverse effects associated with EPM **treatment** included worsening of neurologic signs, anemia, abortion, and leukopenic and febrile episodes.

L25 ANSWER 21 OF 23 CABA COPYRIGHT 2003 CABI

AN 1998:76244 CABA

DN 982206910

TI Equine protozoal myeloencephalitis (EPM) in an imported American Paint horse

ANSWER 2 OF 2 MEDLINE

AN 96342244 MEDLINE

DN 96342244 PubMed ID: 8720045

TI Toxicity and properties of the extract from **Sarcocystis** cruzi cysts.

AU Saito M; Taguchi K; Shibata Y; Kobayashi T; Shimura K; Itagaki H

CS Kumagaya Meat Inspection Center Saitama Prefecture, Japan.

SO JOURNAL OF VETERINARY MEDICAL SCIENCE, (1995 Dec) 57 (6) 1049-51. Journal code: A27; 9105360. ISSN: 0916-7250.

CY Japan

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199610

ED Entered STN: 19961022
Last Updated on STN: 19961022
Entered Medline: 19961009

AB The extract from **Sarcocystis** cruzi cysts in bovine muscle was subcutaneously injected to mice, guinea pigs, chickens, and rabbits to detect its toxicity. Only rabbits showed reactions after administration of the extract at a dose of 25 micrograms. The main clinical signs of the rabbits were depression, reduction in body temperature and intermittent diarrhea and the hematological findings observed were elevation in WBC, RBC, PCV, TP, BUN, AST, AUT and creatinine values and reduction in glucose, K+ and pH of blood. The extract, crude toxin, was a water soluble, acid-alkali stable and thermolabile protein and estimated to be a molecular mass of 15-**16 kd**.